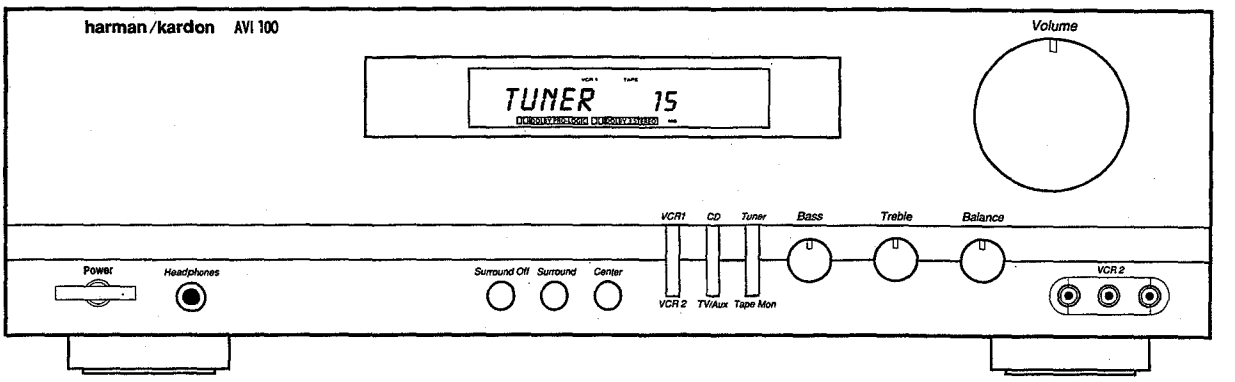
The Harman Kardon
Model AVI100

Manual A

AUDIO AND VIDEO AMPLIFIER

Technical Manual



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harman/kardon

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1112-AVI100A G9603 1200 Printed in Korea

SPECIFICATIONS

● FRONT AMP SECTION

	Nominal	Limit
RMS Output Power		
THD 0.2 %, 8 ohms		
Both Channel Driven (20 Hz-20 kHz)	≧ 35 W	≧ 30 W
THD at 35 W, 8 ohms		
20 Hz	≦ 0.09 %	≦ 0.2 %
1 kHz	≦ 0.09 %	≦ 0.2 %
20 kHz	≦ 0.09 %	≦ 0.2 %
IM Distortion at 35 W, 8 ohms, 60:7000 Hz=4:1	≦ 0.1 %	≦ 0.2 %
Input Sensitivity at 35 W, 8 ohms		
CD, AUX, VCR	150 mV	150±30 mV
S/N Ratio Input Shorted at Volume Max.		
(WTD IHF-A) at 35 W, 8 ohms		
CD, AUX	≧ 95 dB	≧ 90 dB
TV, VCR1, 2	≧ 85 dB	≧ 80 dB
Tone Control		
Bass, 50 Hz	±10 dB	±10±2 dB
Treble, 10 kHz	±10 dB	±10±2 dB
Frequency Response at 1 W, 8 ohms		
CD/AUX		
20 Hz, 20 kHz	±1.0 dB	±1.5 dB
Channel Crosstalk Input Shorted at 35 W, 8 ohms		
1 kHz	≧ 60 dB	≧ 50 dB
10 kHz	≧ 47 dB	≧ 45 dB

● CENTER AMP SECTION

	Nominal	Limit
RMS Output Power.		
THD 0.9 %, 8 ohms, 1 kHz	≧ 32 W	≧ 30 W
Only Center Channel Driven		
S/N Ratio		
Input Shorted, IHF-A WTD	≧ 67 dB	≧ 65 dB
Frequency Response at -3 dB		
Normal	100 Hz-20 kHz	120 Hz-15 kHz
Wide	20 Hz-20 kHz	50 Hz-15 kHz

● REAR AMP SECTION

	Nominal	Limit
RMS Output Power.		
THD = 1 %, 8 ohms, 1 kHz	≧ 21 W x 2	≧ 20 W x 2
Both Rear Channel Driven		
S/N Ratio		
Input Shorted, (IHF-A WTD)		
Dolby	≧ 60 dB	≧ 55 dB
Frequency Response at -3 dB		
8 ohms, Dolby Pro-Logic	80 Hz-9 kHz	100 Hz-6 kHz

● VIDEO SECTION

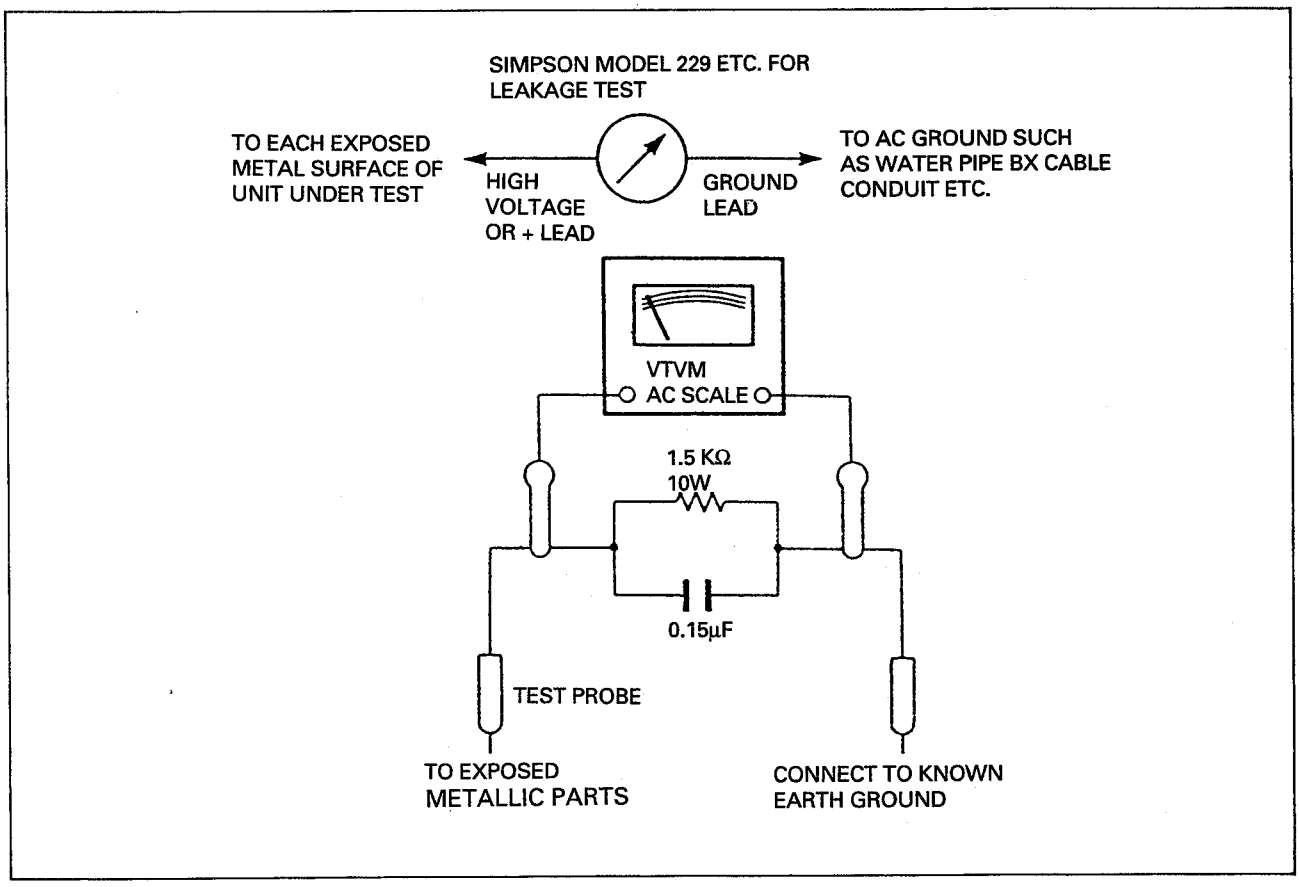
	Nominal	Limit
Frequency Response at -3 dB	DC -10 MHz	5-6 MHz
Crosstalk at 1.0 MHz	≧ 50 dB	≧ 45 dB
Input Sensitivity/Impedance.		
VCR1, VCR2	1 Vp-p/75 Ω	1 Vp-p/75Ω
Output Level/Impedance		
VCR1, REC out, TV Monitor Out	1 Vp-p/75 Ω	1 Vp-p/75Ω

Note : Nominal speces represent the design specs. All units should be able to approximate these. Some will exceed and some may drop slightly below these specs. Limit specs represent the absolute worst condition that still might be considered acceptable ; in no case should a unit fail to meet limit specs. This manual is based on the Europe Standard wiring diagram, and information on regional component variations through use of parts list. Design and specifications are subject to change without notice for improvement.

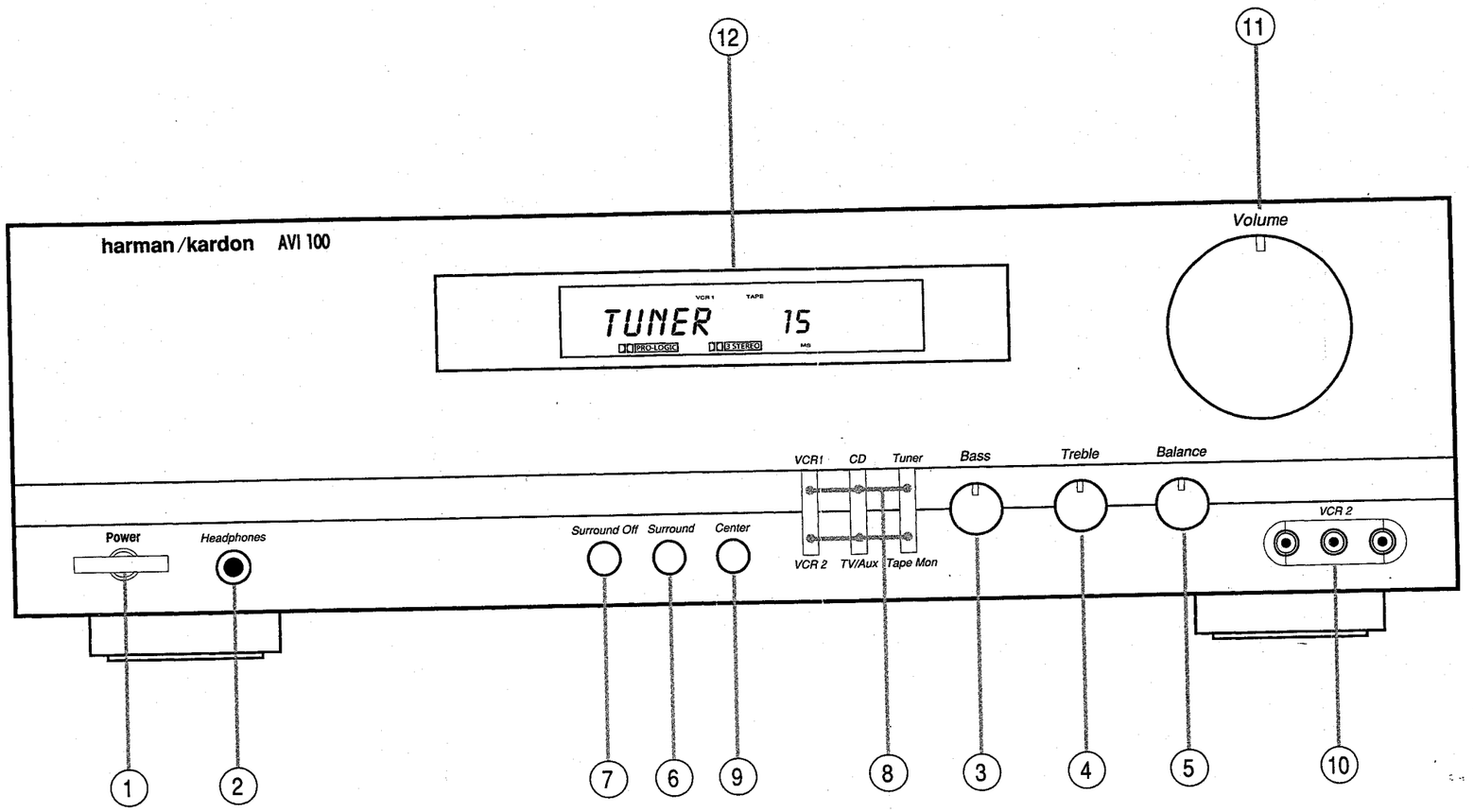
LEAKAGE TEST

Before returning the unit to the user, perform the following safety checks:

1. Inspect all lead dress to makes certain that leads are not pinched or that hardware is not lodged between the chassis and other metallic parts in the unit.
2. Be sure that any protective devices such as nonmetallic control knobs, insulating fishpapers, cabinet backs, adjustment and compartment covers or shields, isolation resistor-capacity networks, mechanical insulators, etc. Which were removed for servicing are properly reinstalled.
3. Be sure that no shock hazard exists; check for leakage current using Simpson Model 229 Leakage Tester, standard equipment item No. 21641, RCA Model WT540A or use alternate method as follows: Plug the power cord directly into a 230-volt AC receptacle (do not use an Isolation Transformer for this test). Using two clip leads, connects a 1500 Ohm, 10-watt resistor paralleled by a 0.15µF capacitor, in series with all exposed metal cabinet parts and a known earth ground, such as a water pipe or conduit. Use a VTVM or VOM with 1000 Ohms per volt, or higher sensitivity to measure the AC voltage drop across the resistor. (See Diagram.) Move the resistor connection to each exposed metal part having a return path to the chassis (antenna, metal cabinet, screw heads, knobs and control shafts, escutcheon, etc.) and measure the AC voltage drop across the resistor. (This test should be performed with the power switch in both the On and Off positions.)
   A reading of 0.35 volt RMS or more is excessive and indicates a potential shock hazard which must be corrected before returning the unit to the owner.


SIMPSON MODEL 229 ETC. FOR LEAKAGE TEST
TO EACH EXPOSED METAL SURFACE OF UNIT UNDER TEST
HIGH VOLTAGE OR + LEAD
GROUND LEAD
TO AC GROUND SUCH AS WATER PIPE BX CABLE CONDUIT ETC.
VTVM
AC SCALE
1.5 KΩ
10W
0.15µF
TEST PROBE
TO EXPOSED METALLIC PARTS
CONNECT TO KNOWN EARTH GROUND

CONTROLS AND FUNCTIONS



1. POWER BUTTON
Press this button to turn the power on. Press again to turn the power off. If you connect the other components to the switched outlet, it can also be used as a system power button.

2. HEADPHONE JACK
Stereo headphones can be plugged into this jack for private listening. Headphone impedance should be between 8 and 2K ohms. Best results between 200 and 400 ohms.

3. BASS CONTROL
Modifies the low-frequency sound of the left and right channels as much as +/- 10dB. Set this control at a suitable position for your taste and room acoustics.

4. TREBLE CONTROL
Modifies the high-frequency sound of the left and right channels as much as +/- 10dB. Set this control at a suitable position for your taste and room acoustics.

5. BALANCE CONTROL
This control is used for balancing the relative sound volume of the left and right channel speakers. Clockwise rotation reduces the volume from the left speaker, counterclockwise rotation reduces the volume from the right speaker.

6. SURROUND MODE SELECTOR
Press this button to select the desired surround mode. The mode is changed between DOLBY PRO-LOGIC and DOLBY 3-STEREO.

7. BYPASS SELECTOR
Defeats all surround modes.

8. INPUT FUNCTION SELECTOR BUTTONS
Press these buttons to select the desired input source.

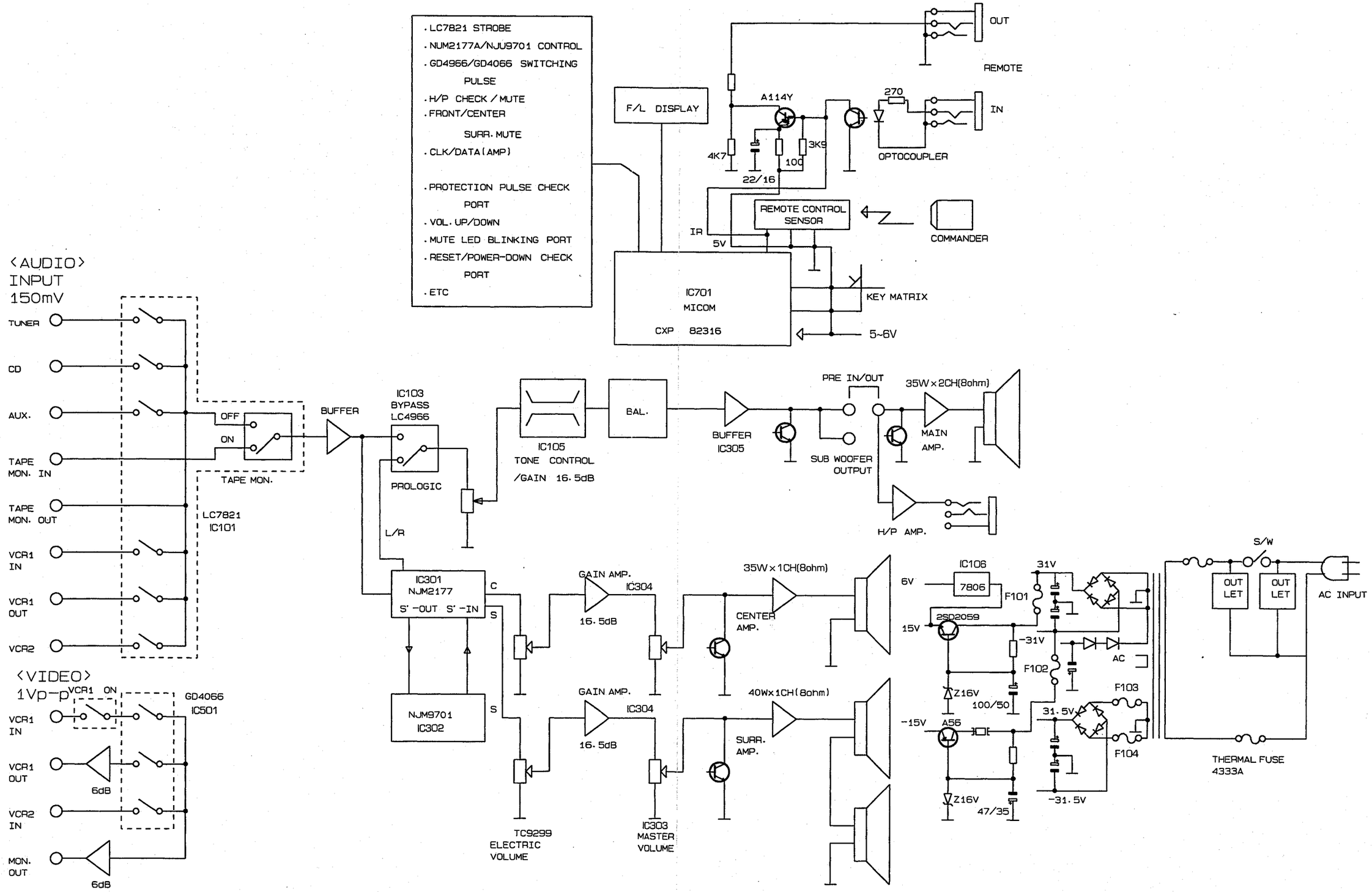
9. CENTER
Push this button to change center channel modes.

10. VCR 2 INPUT JACKS
Connect these jacks to the corresponding output jacks of a VCR or Camcorder.

11. VOLUME CONTROL
Turn the VOLUME clockwise to increase the volume and counterclockwise to decrease it. The volume of the front, center, and rear channels is changed at the same time.

12. DISPLAY WINDOW
This window shows the state of operation for easier control of the amplifier. It also contains the IR Remote Sensor.

BLOCK DIAGRAM



DISASSEMBLY PROCEDURES

[1] Cover Top Removal (Figure 1)

1. Remove 4 screws (① to ④) from the both sides of chassis.
2. Remove 2 screws (⑤ and ⑥) from the chassis back.
3. Carefully lift the cover top to remove.

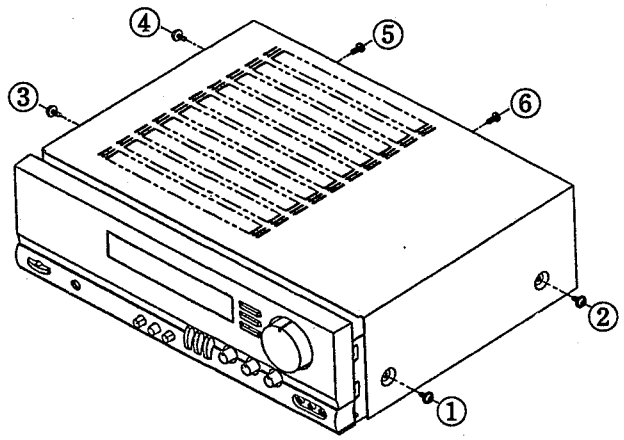


Figure 1

[2] Cover Bottom Removal (Figure 2)

1. Remove 12 screws (① to ⑫) from the cover bottom.
2. Carefully lift the cover bottom to remove.

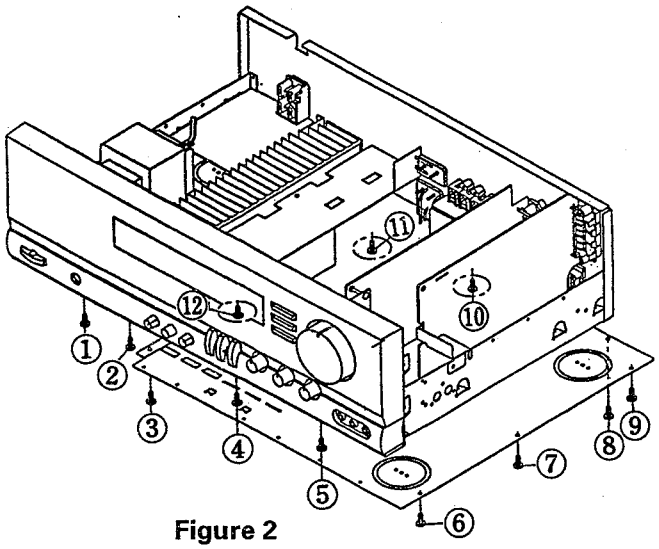


Figure 2

[3] Panel Front Assembly Removal (Figure 3)

1. Remove the cover top and cover bottom (Refer to step [1] and [2]).
2. Remove 4 screws (① to ④) from both sides of the panel front.
3. Remove 2 screws (⑤ and ⑥) from the bottom of the panel front.
4. Disconnect CNT107, CNT114, CNT116, CNT111 from the main PC Board.
5. Disconnect CNT113-1 from the Video PC Board.
6. Disconnect CNT112 from the Outlet PC Board.
7. Disconnect CNT105-1 from the Front PC Board.
8. Remove a screw ⑦ from the right frame to release lug wire.
9. Remove a screw ⑧ from the left frame to release lug wire.
10. Disconnect CP801 from the Power supply PC Board.

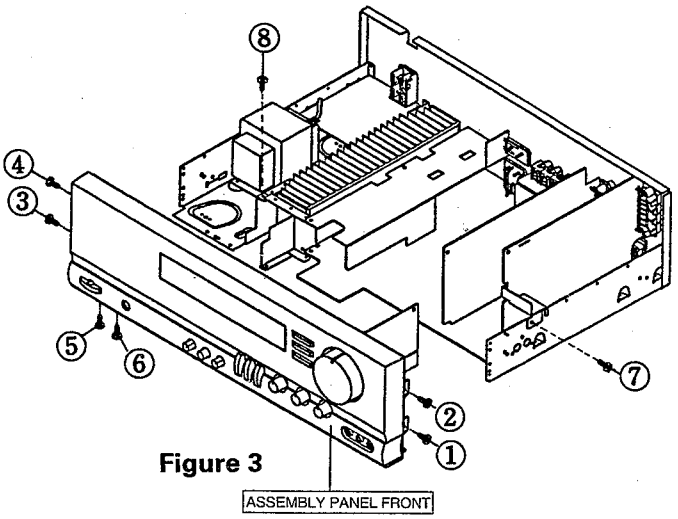


Figure 3

[4] Volume and Front PC Board Removal (Figure 4)

1. Remove the panel front assembly. (Refer to step [3]).
2. Disconnect CNT700 from the Volume PC Board.
3. Disconnect CNT701 from the Front PC Board.
4. Pull the knob(Volume) from the panel front.
5. Remove the hex nut from the volume motor and remove 5 screws (① to ⑥) from the Front PC Board to release the Volume and Front PC Board.

[5] VCR2 PC Board Removal (Figure 4)

1. Remove the panel front assembly (Refer to step [3])
2. Remove 2 screws (⑦ and ⑧) from the Video PC Board to release the PC Board.

[6] Tone PC Board Removal (Figure 4)

1. Remove the panel front assembly. (Refer to step [3]).
2. Pull the knobs (Bass/Treble/Balance) from the panel front assembly.
3. Remove the hex nuts from the variable resistors to release the Tone PC Board.

[7] Headphone PC Board Removal (Figure 4)
1. Remove the panel front assembly (Refer to step [3])
2. Remove a screw ⑨ from the headphone jack.
3. Remove 2 screws (⑩ and ⑪) from the power switch to release the Headphone PC Board.

[8] Power LED PC Board Removal (Figure 4)
1. Remove the panel front assembly (Refer to step [3])
2. Remove the Headphone PC Board (Refer to step [7])
3. Remove 2 screws (⑩ and ⑪) from the power switch to release the Headphone PC Board.

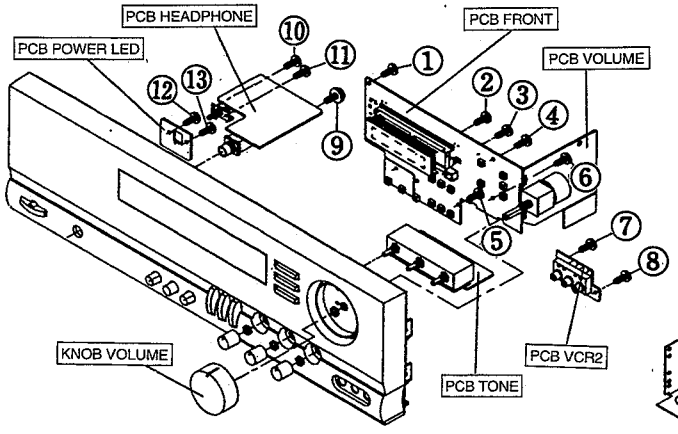


Figure 4

[9] Surround PC Board Removal (Figure 5)
1. Remove the cover top (Refer to step [1])
2. Remove 2 screws (④ and ⑤) from the chassis back.
3. Disconnect CNT108 and CNT109 from the Main PC Board to release the Surround PC Board.

[10] Video PC Board Removal (Figure 5)
1. Remove the cover top (Refer to step [1])
2. Remove 2 screws (⑥ and ⑦) from the chassis back.
3. Disconnect CNT112 from the Main PC Board to release the Video PC Board.

[11] Center Speaker PC Board Removal (Figure 5)
1. Remove the cover top (Refer to step [1]).
2. Remove a screws (⑧ and ⑨) from the chassis back.
3. Disconnect CNT117-1 from the Center speaker P.C Board.

[12] Surround Amp/Rear Speaker PC Board Removal (Figure 5)
1. Remove the cover top (Refer to step [1])
2. Remove 2 screws (⑩ and ⑪) from the chassis back.
3. Remove 2 screws (⑫ and ⑬) from the Surround Amp P.C Board.
4. Unsolder all leads of Q414, Q410, Q413, Q427, Q424, Q428 in the Surround Amp PC Board.
5. Disconnect CNT110 from the Main P.C Board to relase the Surround Amp/Rear speaker P.C Board.

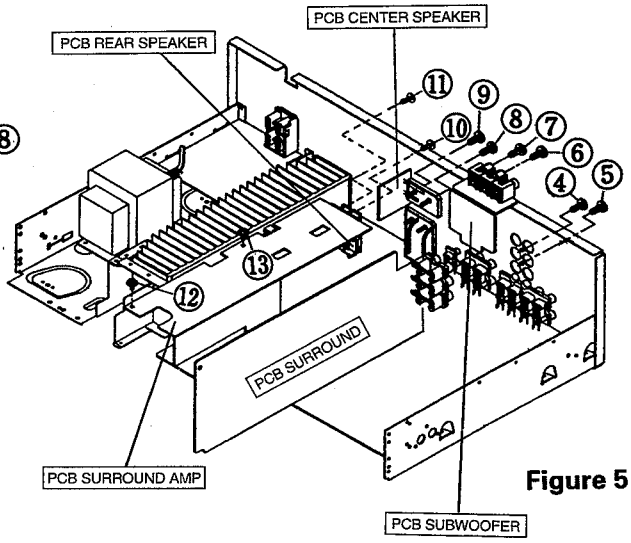


Figure 5

[13] Outlet PC Board Removal (Figure 6)
1. Remove the cover top (Refer to step [1]).
2. Remove 2 screws (① and ②) from the chassis back.
3. Disconnect CNT101-1 from the Outlet P.C Board.
4. Remove 3 screws (③ to ⑤) from the Outlet P.C Board.

[14] Main P.C Board Removal (Figure 6)
1. Remove the cover top (Refer to step [1])
2. Remove the panel front assembly (Refer to step [3])
3. Do step [9], [10], [11], [12], [13].
4. Remove 5 screws (⑥ and ⑩) from the chassis back.
5. Remove 4 screws (⑪ and ⑭) from the Main P.C Board top.

6. Disconnect CNT103, CNT102, CNT104 from the Main P.C Board.
7. Unsolder all leads of Q216L/R, Q211L/R, Q215L/R, Q186, IC105 P201 in the Main P.C Board.
8. Relese the Main P.C.Board.

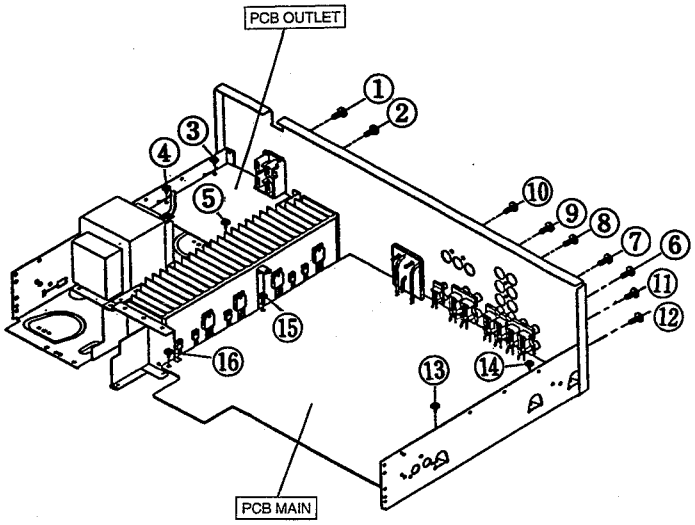
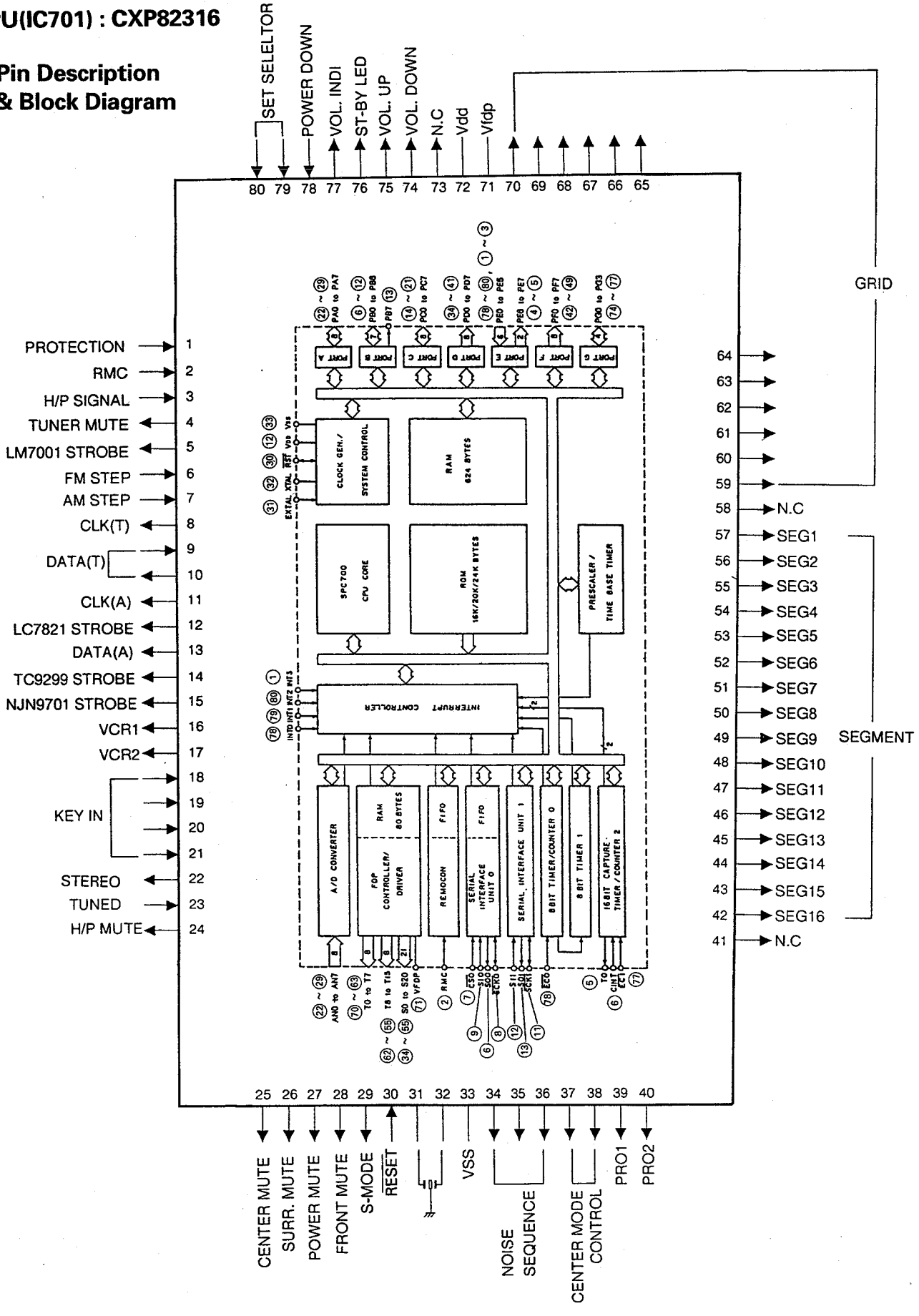


Figure 6

CIRCUIT DESCRIPTION

CPU(IC701) : CXP82316

1. Pin Description & Block Diagram



2. Input and Output Terminal Functions

<table>
<tr><th>Pin. No.</th><th>Symbol</th><th>Description</th></tr>
<tr><td>1</td><td>PROTECTION</td><td>Input for protection signal.
If it is low, all channel mute signal level is turned to high. Except for first 3 second it doesn't check protection.</td></tr>
<tr><td>2</td><td>RMC</td><td>Input for remote control signal.("L-active")</td></tr>
<tr><td>3</td><td>H/P SIGNAL</td><td>Input for headphone signal.</td></tr>
<tr><td>4</td><td>TUNER MUTE</td><td>Output for tuner mute.
Output,high under the following conditions.
1. When power is turned on or off.
2. When tuner band is changed.
3. When tuner up or down button is pressed.
4. When preset button is pressed.
5. When preset number display changes during memory scan.
6. When the protection port is low.
7. When "-∞ mute signal" is received from the commander.</td></tr>
<tr><td>5</td><td>LM7001 STROBE</td><td>Output to enable IC LM7001.</td></tr>
<tr><td>6, 7</td><td>STEP</td><td>Input to select step.
<table>
<tr><td>BAND</td><td>STEP</td><td>6</td><td>7</td></tr>
<tr><td>FM</td><td>50 K</td><td>L</td><td>H</td></tr>
<tr><td>AM</td><td>10 K</td><td>L</td><td>H</td></tr>
<tr><td>FM</td><td>50 K</td><td>L</td><td>L</td></tr>
<tr><td>AM</td><td>9 K</td><td>L</td><td>L</td></tr>
</table></td></tr>
<tr><td>8,10</td><td>CLK(T),DATA(T)</td><td>Output, clock and data signal to IC LM7001.</td></tr>
<tr><td>11,13</td><td>CLK(A),DATA(A)</td><td>Output, clock and data signal to ICs, LC7821, NJU9701 and TC9299.</td></tr>
<tr><td>12</td><td>LC7821 STROBE</td><td>Output to enable IC LC7821.</td></tr>
<tr><td>14</td><td>TC9299 STROBE</td><td>Output to enable IC TC9299.</td></tr>
<tr><td>15</td><td>NJN9701 STROBE</td><td>Output to enable IC NJN9701.</td></tr>
<tr><td>16, 17</td><td>VCR1/VCR2</td><td>Output to select the video signal of VCR1 or VCR2.
Output data for each mode is as follows.
<table>
<tr><td>MODE</td><td>18</td><td>19</td></tr>
<tr><td>VCR1</td><td>H</td><td>L</td></tr>
<tr><td>VCR2</td><td>L</td><td>H</td></tr>
<tr><td>ELSE</td><td>△</td><td>△</td></tr>
</table>
△ : keeping last state.</td></tr>
<tr><td>18～21</td><td>KEY INPUT</td><td>Input data of K_1 - K_4 for key scan.</td></tr>
<tr><td>22</td><td>STEREO</td><td>Receiving low level, it turns on the stereo flag of FL.</td></tr>
<tr><td>23</td><td>TUNED</td><td>Input for station detector signal in searching turning.
Stops searching up or down when station detector reached a certain level.</td></tr>
<tr><td>24</td><td>H/P MUTE</td><td>Output for headphone mute.
Output, low level under the following conditions.
1. When power is turned on or off.
2. When headphone plug is removed from headphone jack.</td></tr>
<tr><td>25</td><td>CENTER MUTE</td><td>Output for center mute.
Output, low level under the following conditions.
1. When power is turned on or off.
2. When center mode is turned on or off.
3. When center mode is switched.
4. When test tone mode is switched on, or when output is not directed to center.</td></tr>
</table>

<table>
<tr><th>Pin. No.</th><th>Symbol</th><th>Description</th></tr>
<tr><td>26</td><td>SURR MUTE</td><td>Output for surround mute.
Output, low under the following conditions.
1. When power is turned on or off.
2. When surround mode is turned on or off.(Keeping low level in surr. off.)
3. When test tone mode is changed, or when output is not directed to surround.
4. When delay time is switched.
5. When the protection terminal's level is low.
6. When "-∞ mute signal" is received from the commander.
7. When headphone jack is inserted.</td></tr>
<tr><td>27</td><td>POWER MUTE</td><td>Output for all amp. mute.
Output is low under the following conditions.
1. When power is turned on or off.
2. When the protection terminal's level is low.</td></tr>
<tr><td>28</td><td>FRONT MUTE</td><td>Output for main mute.
Output is low under the following conditions.
1. When power is turned on or off.
2. When function is changed.
3. When mono and stereo is changed.
4. When the protection terminal's level is low.
5. When "-∞ mute signal " is received from the commander.
6. When headphone plug is inserted.</td></tr>
<tr><td>29</td><td>S-MODE</td><td>Output voltage to control surround mode.
Prologic:5V, 3-stereo:2.5V, bypass:0V</td></tr>
<tr><td>30</td><td>RESET</td><td>Input to reset micom</td></tr>
<tr><td>31,32</td><td>EXTAL, XTAL</td><td>Input and output pin for a oscillator crystal.</td></tr>
<tr><td>33</td><td>VSS</td><td>Provides the ground potential.</td></tr>
<tr><td>34～36</td><td>NOISE SEQUENCE</td><td>Output signal to select output channal in testing tone.
Output signal for 2 second per each channal in order L,C,R,S.
<table>
<tr><th>MODE / PIN No.</th><th>L</th><th>C</th><th>R</th><th>S</th><th>TEST TONE OFF</th></tr>
<tr><td>34</td><td>L</td><td>L</td><td>L</td><td>L</td><td>H</td></tr>
<tr><td>35</td><td>L</td><td>L</td><td>H</td><td>H</td><td>△</td></tr>
<tr><td>36</td><td>L</td><td>H</td><td>L</td><td>H</td><td>△</td></tr>
</table></td></tr>
<tr><td>37, 38</td><td>CENTER MODE CONTROL</td><td>Output data to control center mode.
<table>
<tr><th>MODE / PIN No.</th><th>NORMAL</th><th>PHANTOM</th><th>WIDE</th></tr>
<tr><td>37</td><td>H</td><td>L</td><td>L</td></tr>
<tr><td>38</td><td>L</td><td>L</td><td>H</td></tr>
</table></td></tr>
<tr><td>39, 40</td><td>PRO1, PRO2</td><td>Input for protection signal.</td></tr>
<tr><td>41</td><td>NC</td><td>Not used.</td></tr>
<tr><td>42～57</td><td>S16-S1</td><td>Output for segment.</td></tr>
<tr><td>58</td><td>NC</td><td>Not used.</td></tr>
<tr><td>59～70</td><td>G1-G12</td><td>Output for grid.</td></tr>
<tr><td>71</td><td>Vfdp</td><td>Input power supply of the FL controller.</td></tr>
<tr><td>72</td><td>Vdd</td><td>Power supply.</td></tr>
<tr><td>73</td><td>NC</td><td>Not used.</td></tr>
<tr><td>74, 75</td><td>VOL. UP/DOWN</td><td>Output signal to turn up or down volume motor.</td></tr>
</table>

Pin. No.	Symbol	Description
76	ST-BY LED	Output to control ST-BY LED. When power is turned on by power s/w or off by remocon, it is high level. Else, it is low level. (Keeping last level)
77	VOL. INDI.	Output signal to turn on or off the led which is used to master volume indicator. It is high level in turning on and low level in turning off.
78	PD	Input for power down. (At "L", it is active)
79, 80	SELECTOR	Input signal to select one of three sets(AVR10, AVI100 and HK3250).

SET	AVR10	AVI100	HK3250
79	H	L	L
80	L	L	H

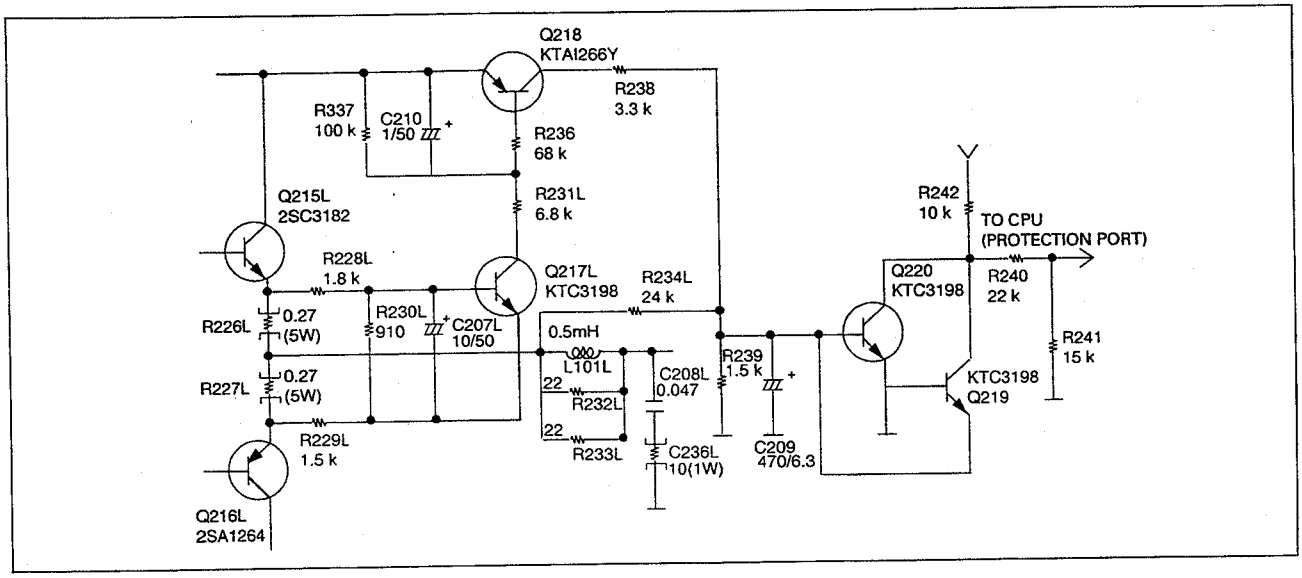
3. Key Matrix

PIN NO.	51	52	53	54
18	SURR1. BYPASS	SURR. MODE	SEEK STEREO	PRESET UP
19	TAPE MON.	VCR1	TUNER ▼ PRESET ▲	PRESET DOWN
20	TV/VCR2	CD	MEMORY	
21	AUX	FM	AM	

4. Protection Circuits

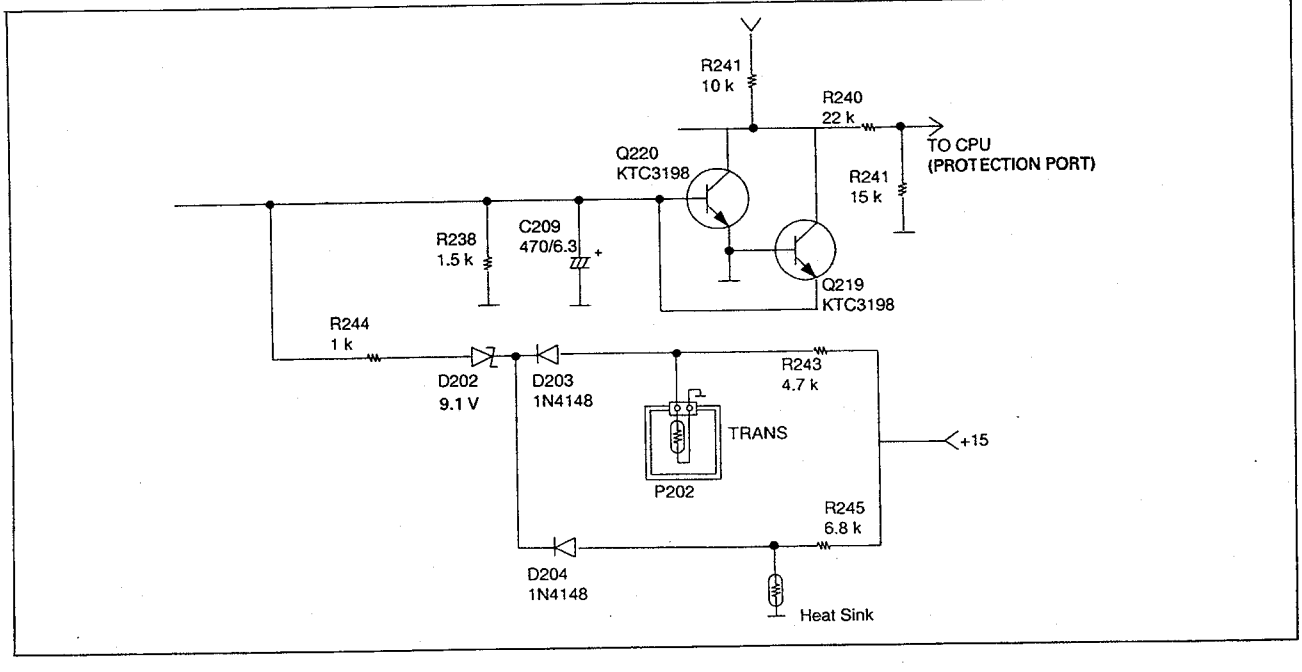
SPEAKER PROTECTION CIRCUIT

The CPU protects both this unit and the speakers when an abnormally high current flows in Q215 L/R and Q216 L/R due to excessive input drive, too low of a load impedance, or short of the speaker terminals. If current increase is excessive the voltage across R226 L/R or R227 L/R turns on Q217 L/R, then Q218 turns on Q220.
It makes the protection port of the CPU to low state.
Then all channels are muted and the display is turned off.



THERMAL PROTECTION CIRCUIT

This receiver has a overload thermal protection circuits to guard against abnormal operation.
When the temperature of TRANS POSISTOR installed with the main transformer or H/SINK POSISTOR rises abnormally, the resistance of the posistor becomes larger and Q220 is turned on.
It makes the protection port of the CPU to low state. Then all channels are muted and the display is turned off.



TROUBLESHOOTING

Symptom	Cause and Remedy
Receiver inoperative. (FL indicator does not light.)	A) Faulty AC power cord. Replace. B) Defectve the power switch. Replace. C) Broken wire in the power transformer. Replace the power transformer. D) Blown fuse. Replace the fuse.
Fuse blows when power is turned on.	A) Defective power transformer. Replace. B) Short on the primary or secondary of the transformer circuitry. Repair the trace. C) Damaged rectifier (D208 to D211) or damaged transistor (Q216, Q217). Replace the defective component(s). D) Short circuit in the amplifier circuit. Replace the shorted component(s) in the amplifier circuit.
Power indicator lights but no sound from both channels.	A) Defect in transistor Q215 L/R, Q216 L/R on the Main Amp Board. Replace the defective component(s).
One channel does not work when volume is at maximum with a test signal applied to the center terminal of volume control VR5 of the dead channel.	A) Defect in transistors Q215 L/R, Q216 L/R on the Main Amp Board Locate and correct the defect. B) Break in copper foil of printed circuit board. Repair the circuit trace. C) Short in speaker output terminal. Repair or replace.
Speaker works normally but headphones inoperative.	A) Headphone plug does not match with the jack. Replace the jack. B) Defective resistor R728L/R. Replace.
Bass control has no effect	A) Variable resistor BASS defective. Replace. B) Defective R129L/R, R131L/R, C126L/R, C128L/R. Replace the defective component(s).
Treble control has no effect.	A) Variable resistor TREBLE defective. B) Defective R130L/R, R132L/R, C127L/R, C129L/R. Replace the defective components(s).
Noisy Volume control.	A) Defective volume control. Replace. B) Defective capacitors C701 or C703 Replace the defective capacitor(s).
Remote Control Unit inoperative.	A) Weak Battery. Replace. B) Defective. Replace. C) Defective IC701 (CPU Board) or IC01. Replace.

GENERAL UNIT PARTS LIST

Ref. No.		Description	Mfr. Part No.	Q'ty
		CABINET & CHASSIS		
1		Panel, Front, ABS, Black	048501035031	1
2		Button, Power, ABS, Black	048545128611	1
3		Knob, Volume, ABS, Black	048543059811	1
4		Indicator, Volume	8555048610	1
5		Knob, Rotary(Bass/Treble/Balance)	048545124311	3
6		Window, Display	8553019720	1
7		Filter, FL	048555048512	1
8		Spring, Power	6555008720	1
9		Spring, Indicator	6555008730	2
10		Indicator, Power	8545128810	1
11		Jack, Phone, Push Type	4438004510	1
12		Switch, Power	4628055910	1
13		Button, Surround, 2key	048545128711	1
14		Button, Function, 7key	048543064911	1
15		Volume, Bass/Treble	3208068910	2
16		Volume, Balance	3208068810	1
17		Shield Fence, Tone	6165149710	1
18		Jack, RCA, 3P, VCR	4438109710	1
19		Volume, Motor, 50 k(A)	3228020010	1
20		Switch, Tact	4658004810	9
21		Holder, FL	6043010210	1
22		Fastener	6528301710	1
23		Foot, Hot-Stamping, Gold	046033102510	4
24		Frame, Left	6121607640	1
25		Heatsink, Power	7502008730	1
26		Bracket, PCB	6505139720	1
27		Bracket, Heatsink	6503031410	1
28		Clamp Wire	6528302540	1
29		Frame Right, SECC, 1t	6122633520	1
30		Cover, Bottom	6122420410	1
31		Jack, RCA, 6P	4438108010	1
32		Jack, RCA, 6P	4438103210	1
33		Jack, RCA, 4P	4438103110	2
34		Jack, Multi, 2P	4438007510	1
35		Terminal Speaker, 4P, Screw Type	4408108610	1
36		Terminal Speaker, 2P, Screw Type	4408108710	1
37		Jack, RCA, VCR, 3P	4438114310	1
38		Terminal Speaker, Rear, 4P	4408108910	1
39		Chassis, Back	046102042821	1
40		Stopper Holder	6518002310	1
41	⚠	Cord, AC Power	4308001410	1
42		Jumper, Plug	4328204210	2
43	⚠	Outlet AC	4448104810	1
44		Cover, Top	046122029611	1
45		Clamp Wire	6525002610	1
46		Locking Tie	6528002810	1
		HARDWARE KIT		
S1-S22		Screw #2BTC 3x8B, Black	8109230083	22
S23		Screw Mecha	8155001210	1
S24-S27		Screw WSAM 4x8B	8159440083	4
S28/S29		Screw #2WPTC 3x8Y	8159230081	2
S30/S31		Screw #2BTC 3x8B, Black	8109230083	2
S32		Screw #2WPTC 3x8Y	8159230081	1
S33-S35		Screw #2BTC 3x8B, Black	8109230083	3
S36		Screw #2WPTC 3x8Y	8159230081	1
S37-S50		Screw HEX MSPW 3x12Y	8195000310	14
S51-S53		Screw #2WPTC 3x8Y	8159230081	3
S54		Screw HEX MSPW 3x12Y	8195000310	1
S55/S56		Screw #2WPTC 3x8Y	8159230081	2
S57-S69		Screw #2BTC 3x8B, Black	8109230083	3
S70/S71		Screw #1PT 3x10B, Black	8119130103	2
S72-S75		Screw #2BTC 3x8B, Black	8109230083	4
S76/S89		Screw #1PT 3x10B, Black	8119130103	2
S90/S91		Screw #1PT 3x10B, Black	8119130103	2
S92-S95		Screw WSAM 4x8B	8159440083	4
S96/S97		Screw #2BTC 3x8B, Black	8109230083	2
		MISCELLANEOUS		
Trans	⚠	Power Transformer, 120 V, 60 Hz	2828100297	1
		FPC Cable, 25P, 270mm	4118625275	1

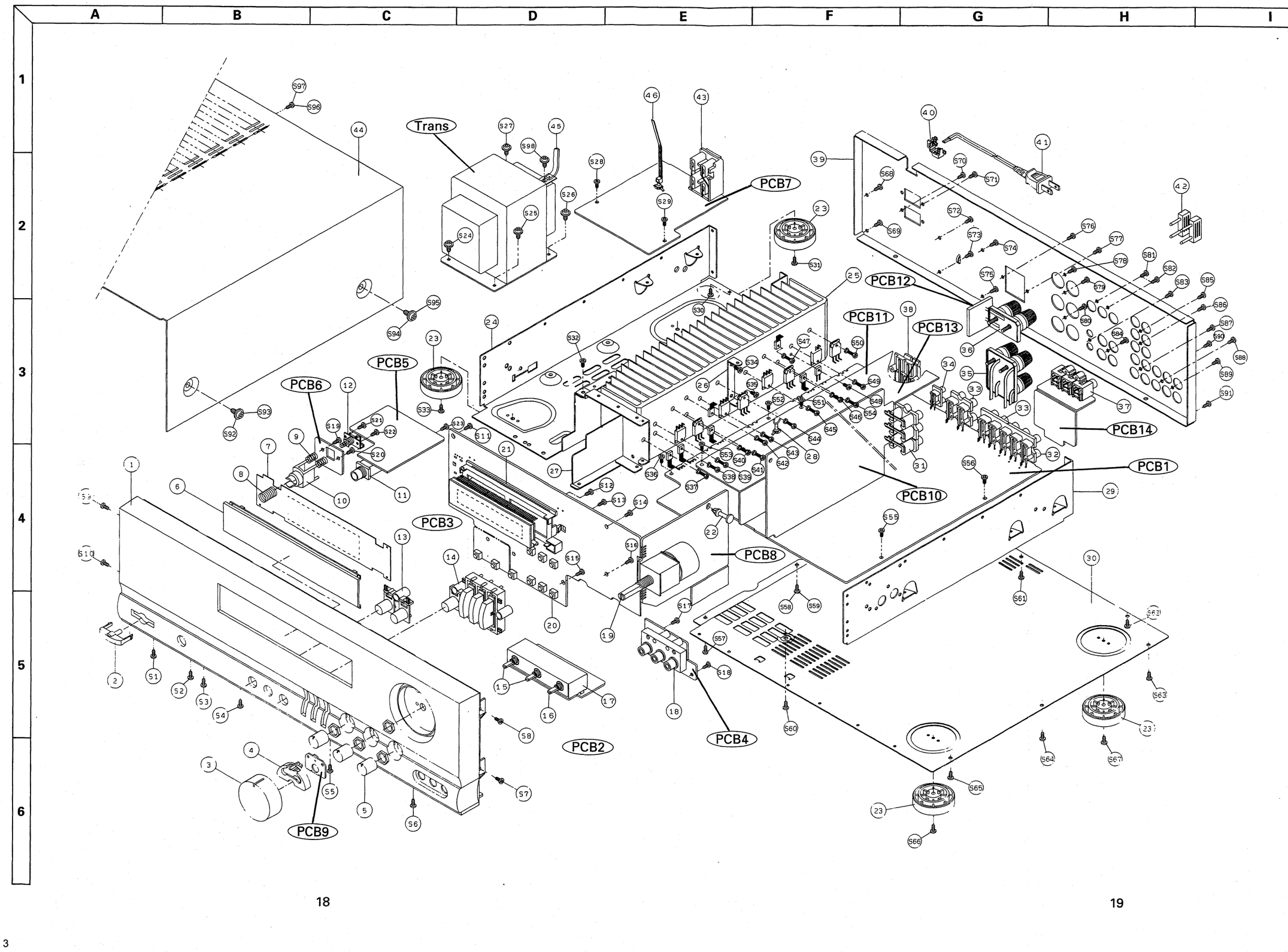
1. This parts list for AVI100 230V version is based on 120V version.
2. Each initial in the Remark is denoted as follows.
C: Changed, D: Deleted, A: Added

Ref. No		Description	Mfr. Part No.	Q'ty	Remark
		CABINET & CHASSIS			
39		Chassis Back, SECC, Black	046102042851	1	C
41	⚠	Cord AC Power	4308000430	1	C
43	⚠	Outlet, AC	4448103610	1	C
		MISCELLANEOUS			
Trans	⚠	Power Transformer, 230 V, 50 Hz	2828100497	1	C

PRODUCT SAFETY NOTICE

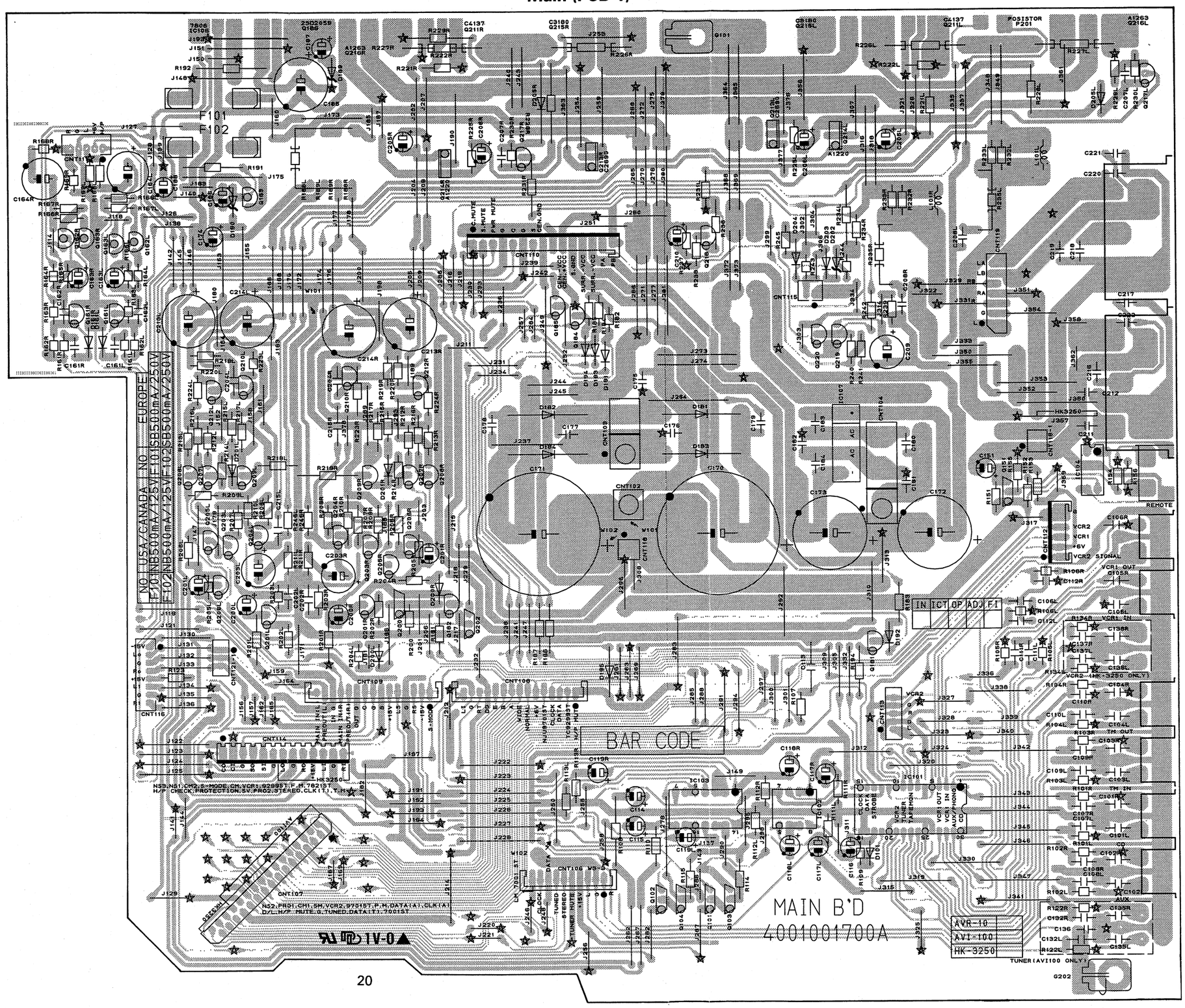
Each precaution in this manual should be followed during servicing. Components identified with the IEC symbol ⚠ in the part list are of special significance to safety. When replacing a component identified with ⚠ , use only the replacement parts designated, or parts with the same ratings of resistance, wattage or voltage that are designated in the parts list in this manual. Leakage-current or resistance measurements must be made to determine that exposed parts are acceptably insulated from the supply circuit before returning the product to the customer.

GENERAL UINIT

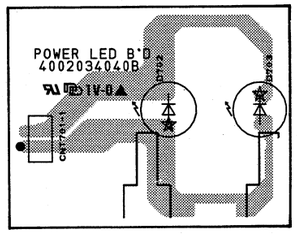


PRINTED CIRCUIT BOARDS

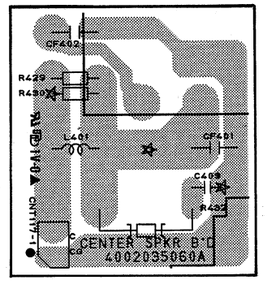
Main (PCB 1)



Power LED (PCB 6)

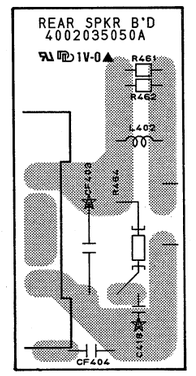


Center Speaker (PCB 12)

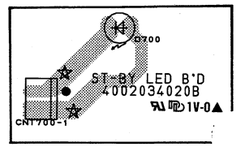


VCR2 (PCB 4)

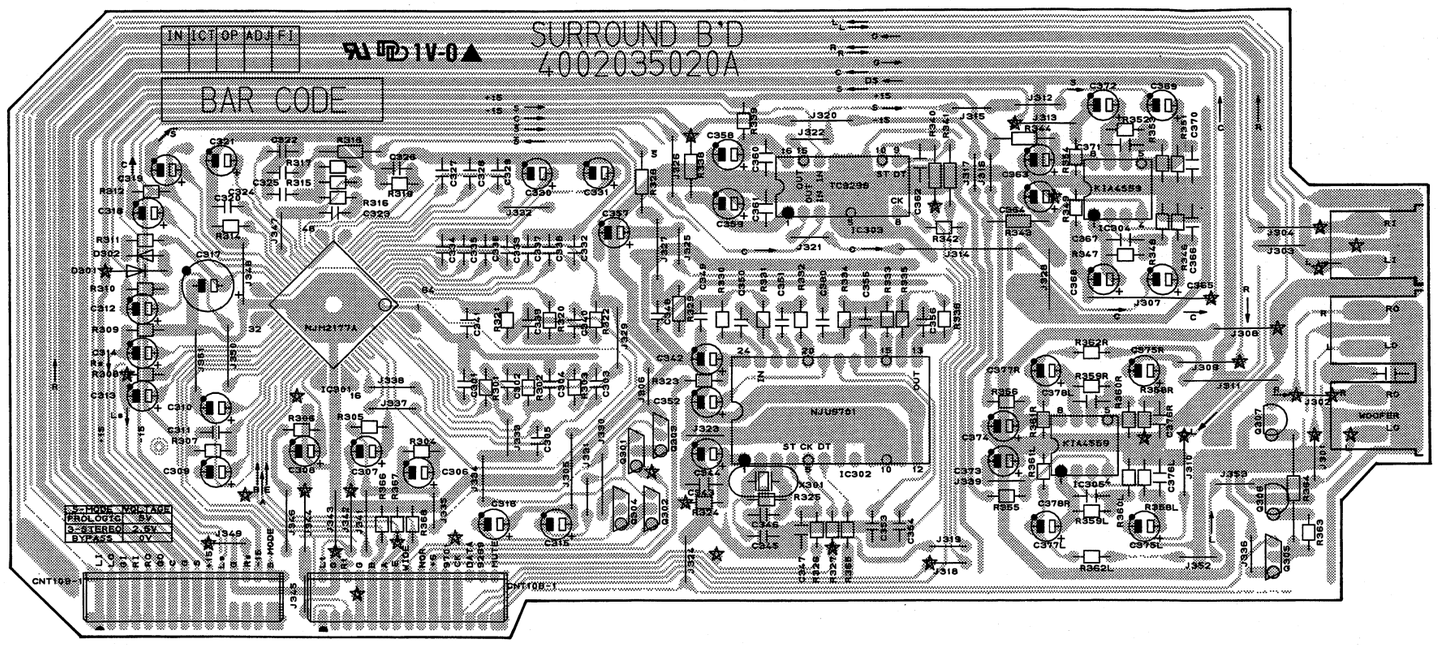
Rear Speaker (PCB 13)



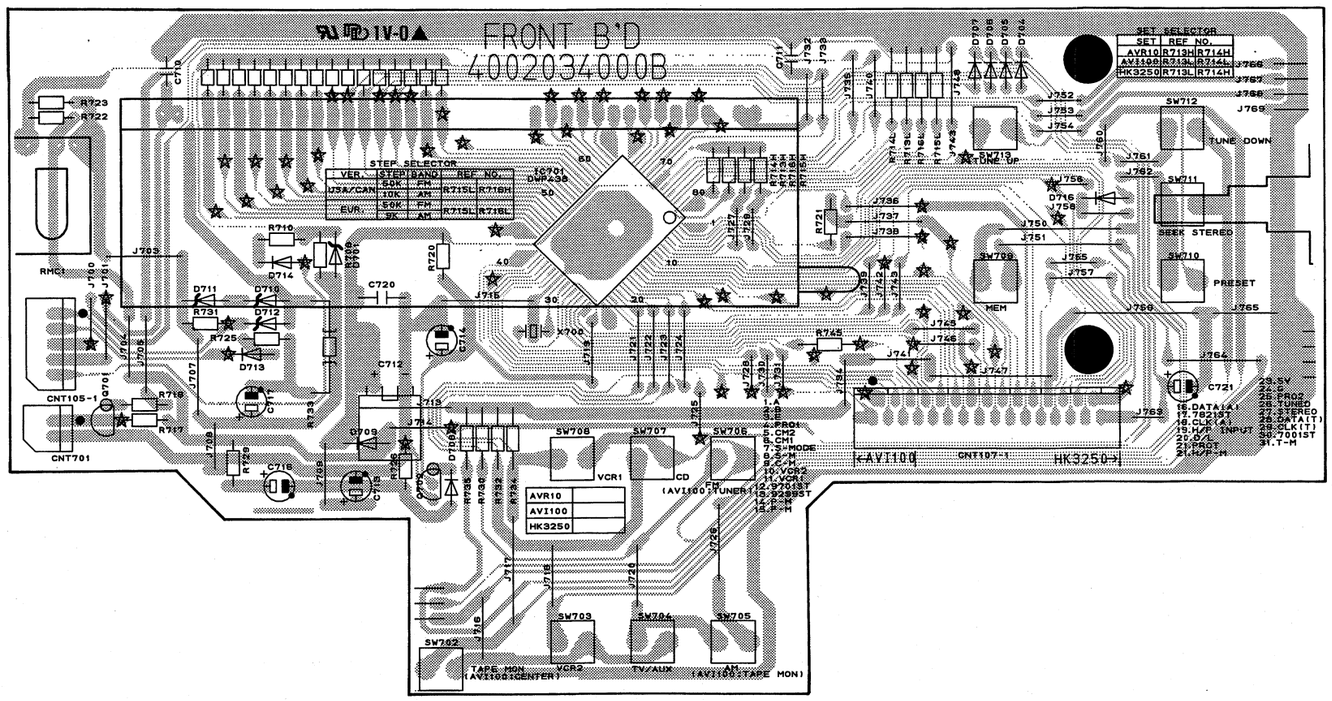
ST-BY LED (PCB 9)



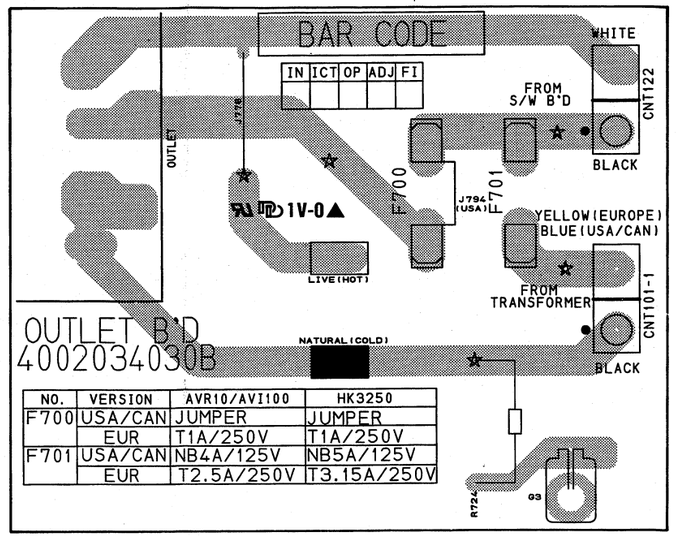
Surround (PCB 10)



Front (PCB 3)

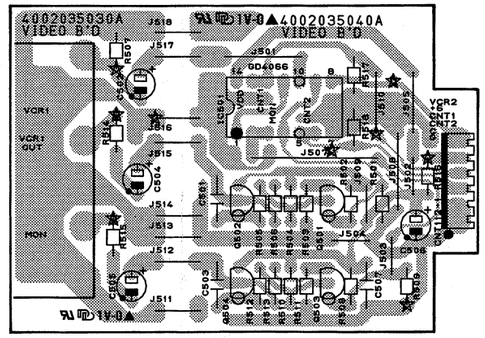


Outlet (PCB 7)

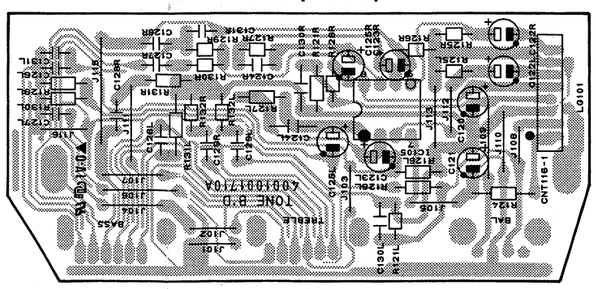


NO.	VERSION	AVR10/AVI100	HK3250
F700	USA/CAN	JUMPER	JUMPER
	EUR	T1A/250V	T1A/250V
F701	USA/CAN	NB4A/125V	NB5A/125V
	EUR	T2.5A/250V	T3.15A/250V

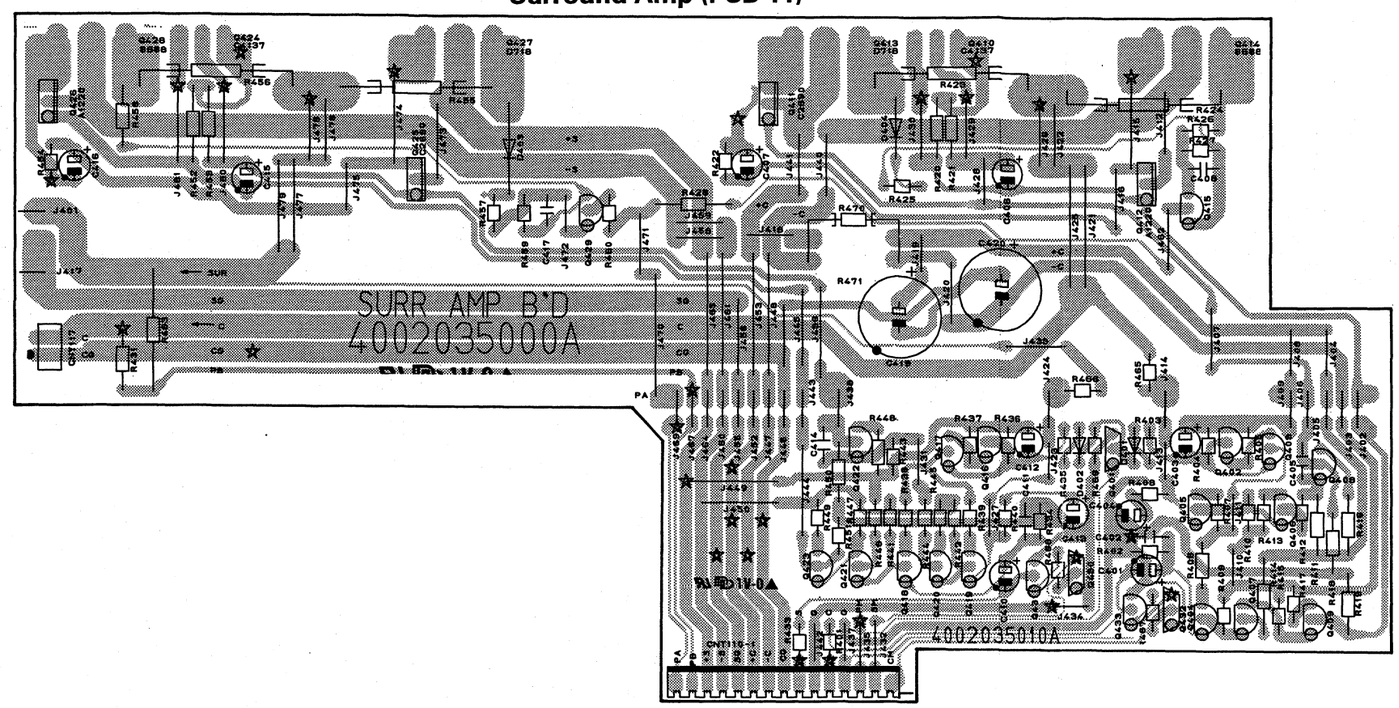
Video (PCB 14)



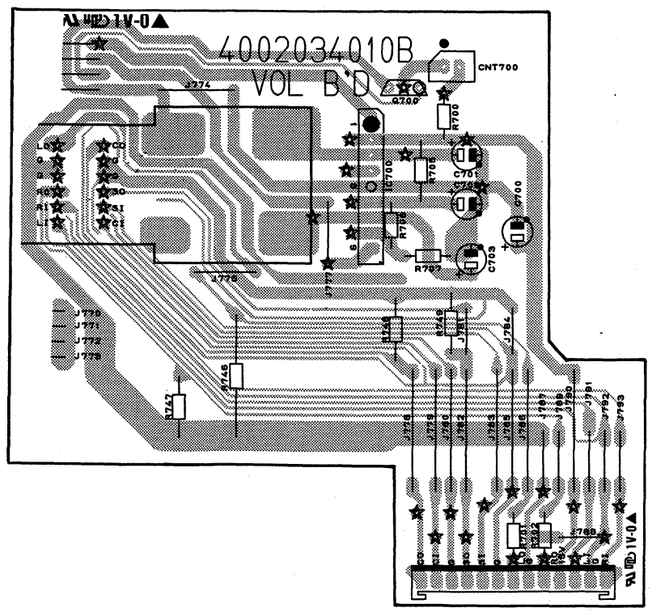
Tone (PCB2)



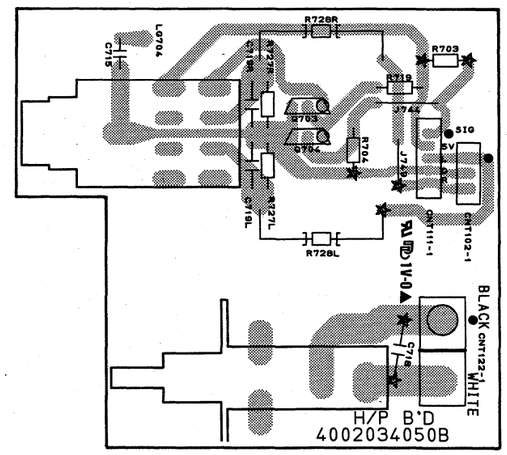
Surround Amp (PCB 11)



Volume (PCB 8)



Headphone (PCB 5)



ELECTRICAL PARTS LIST

PRODUCT SAFETY NOTICE : Products marked with ⚠ have special characteristics important to safety.
If you replace any of these components, read carefully the product safety notice in this manual.
Don't degrade the safety of the product through improper servicing.
Resistor/Capacitor tolerance – D : (±0.5%), J : (±5%), K : (±10%), M : (±20%), Z : +80, – 20%)

Ref. No.	Description					Mfr. Part No.	Q'ty
PCB1	ASSEMBLY P.C.BOARD MAIN						
	CAPACITORS						
C107L/R	Ceramic Tubular	100	pF	50 V	K	3519101935	2
C108L/R	Ceramic Tubular	100	pF	50 V	K	3519101935	2
C109L/R	Ceramic Tubular	100	pF	50 V	K	3519101935	2
C111L/R	Ceramic Tubular	100	pF	50 V	K	3519101935	2
C113	Ceramic Tubular	100	pF	50 V	K	3519101935	1
C114/C115	Electrolytic SG	47	μF	16 V	M	3479347031	2
C116	Electrolytic SG	1	μF	50 V	M	3479310971	1
C117L/R	Electrolytic SG	4.7	μF	50 V	M	3479347971	2
C118L/R	Electrolytic SG	47	μF	16 V	M	3479347031	2
C119L/R	Electrolytic SG	47	μF	16 V	M	3479347031	2
C120/C121	Electrolytic SG	47	μF	16 V	M	3479347031	2
C132L/R	Ceramic Tubular	100	pF	50 V	K	3519101935	2
C136	Ceramic Disc	0.1	μF	50 V	J	3509104512	1
C151	Electrolytic SG	22	μF	10 V	M	3479322021	1
C161L/R	Mylar	0.15	μF	63 V	K	3679154297	2
C162L/R	Ceramic Tubular	47	pF	50 V	J	3519470935	2
C163L/R	Electrolytic SG	4.7	μF	50 V	M	3479347971	2
C164L/R	Electrolytic SG	470	μF	16 V	M	3479347139	2
⚠ C170/C171	Electrolytic HS	6800	μF	50 V	M	3419568224	2
⚠ C172/C173	Electrolytic SG	2200	μF	50 V	M	3409322279	2
C174	Electrolytic SG	4.7	μF	50 V	M	3479347971	1
C175-C184	Mylar	0.047	μF	100 V	J	3679473120	10
C185	Electrolytic SG	330	μF	50 V	M	3409333179	1
C186-C188	Electrolytic SG	4.7	μF	50 V	M	3479347971	3
C200L/R	Electrolytic SG	47	μF	16 V	M	3479347031	2
C201L/R	Electrolytic SG	1	μF	50 V	M	3479310971	2
C202L/R	Ceramic Tubular	68	pF	50 V	J	3579680130	2
C203L/R	Electrolytic SG	470	μF	6.3 V	M	3479347111	2
C204L/R	Ceramic Tubular	47	pF	50 V	J	3519470935	2
C205L/R	Electrolytic SG	10	μF	50 V	M	3479310071	2
C206L/R	Electrolytic SG	4.7	μF	50 V	M	3479347971	2
C207L/R	Mylar	0.068	μF	100 V	J	3679683120	2
C208L/R	Mylar	0.047	μF	100 V	J	3679473120	2
C209	Electrolytic SG	470	μF	6.3 V	M	3479347111	1
C210	Electrolytic SG	1	μF	50 V	M	3479310971	1
C211	Ceramic Disc	0.0022	μF	50 V	Z	3579222130	1
C213L/R	Electrolytic SG	330	μF	50 V	M	3409333179	2
C214L/R	Electrolytic SG	330	μF	50 V	M	3409333179	2
C215L/R	Ceramic Tubular	3.3	pF	50 V	J	3519033935	2
C216	Mylar	0.047	μF	100 V	J	3679473120	1
C217	Ceramic Disc	0.0022	μF	50 V	Z	3579222130	1
C222	Mylar	0.047	μF	100 V	J	3679473120	1
	CONNECTORS						
CNT102-1	Pin Base, 1P					4428525860	1
CNT103-1	Pin Base, 2P					4428525780	1
CNT104-1	Pin Base, 3P					4428525790	1
CNT107	Wafer FPC, 25P					4428509023	1
CNT108	Wafer, 15P, B'D to B'D					4428550150	1
CNT109	Wafer, 15P, B'D to B'D					4428550150	1
CNT110	Wafer, 15P, B'D to B'D Type					4428561520	1
CNT111	Wafer, 5P					4428516410	1
CNT112	Wafer, 6P					4438302927	1
CNT113	Lead Ass'y, 5P, 280mm					436205283332	1
CNT114	Wafer, 13P, B'D to B'D Type					4428551320	1
CNT115	Wafer, 2P					4428516110	1
CNT116	Wafer, 8P					4428516710	1
CNT118	Lead Ass'y, 2P, 200mm, to CNT118-1					436102203601	1
	DIODES						
D101	1N4148, Switching					2058322101	1
D161L/R	1N4148, Switching					2058322101	2
⚠ D181-D184	1N5402, Retifier					2058100105	4
D189/D190	BZ 16BM					2258599120	2
D191-D195	1N4148, Switching					2058322101	5
D200L/R	1N4148, Switching					2058322101	2
D201L/R	1N4148, Switching					2058322101	2
D202	UZ 9.1BSC					2258599107	1
D203/D204	1N4148, Switching					2058322101	2
⚠ IC107	PBL303, Bridge					2058100146	1
	FUSES						
⚠ F101	NB 125 V, 0.5 A					5508201621	1
⚠ F102	NB 125 V, 0.5 A					5508201621	1

Ref. No.	Description	Mfr. Part No.	Q'ty
	INTEGRATED CIRCUITS		
IC101	LC7821	2168017132	1
IC102	KIA4559P (KIA75559P), OP Amp	2168206104	1
IC103	LC4966	2138017108	1
IC104	LTV-817, Optocoupler	2408000136	1
⚠ IC106	KIA7806PI, Regulator	2168606110	1
	COILS		
L101L/R	Inductor, 0.5uH	2648001010	2
	POSISTORS		
P201	Ass'y Posistor, 280mm	052438000280	1
P202	PTH9M04BE222TS2F33	2438012200	1
	TRANSISTORS		
Q101/Q102	DTC114YS	2208622106	2
Q103/Q104	KRA107M(DTA114YS)	2238006103	2
Q151	KRA107M(DTA114YS)	2238006103	1
Q161L/R	BKTC3200BL(KTC2240BL), NPN	2208606108	2
Q162L/R	MPSA06Y, NPN	2208606114	2
Q163L/R	MPSA56Y, PNP	2208206113	2
Q181/Q182	BKTC3198Y(KTC1815Y), NPN	2208606104	2
Q183	MPSA56Y, PNP	2208206113	1
Q184/Q185	BKTC3198Y(KTC1815Y), NPN	2208606104	2
Q186	2SD2059Y(KTD2059Y)	2028406123	1
Q200	DTC114YS	2208622106	1
Q201L/R	2SD1302, NPN	2208606112	2
Q202	KRA107M(DTA114YS)	2238006103	1
Q203L/R	KTA1268(KTA970BL), PNP	2208206104	2
Q204L/R	KTA1268(KTA970BL), PNP	2208206104	2
Q205L/R	KTA1268(KTA970BL), PNP	2208206104	2
Q206L/R	KTA1266Y(KTA1015Y), PNP	2208206105	2
Q207L/R	BKTC3200BL(KTC2240BL), NPN	2208606108	2
Q208L/R	BKTC3200BL(KTC2240BL), NPN	2208606108	2
Q209L/R	KTA1268(KTA970BL), PNP	2208206104	2
Q210L/R	KTA1024Y(BKTA949Y), PNP	2208206102	2
Q211L/R	2SC4137, NPN, Bias	2008622110	2
Q212L/R	KTC3206Y(BKTC2229Y), NPN	2208606107	2
Q213L/R	KSC2690AY, NPN	2008602102	2
Q214L/R	KSA1220AY, PNP	2008202101	2
⚠ Q215L/R	2SC3180N-O	2028307104	2
⚠ Q216L/R	2SA1263N-O	2028007104	2
Q217L/R	BKTC3198Y(KTC1815Y), NPN	2208606104	2
Q218	KTA1266Y(KTA1015Y), PNP	2208206105	1
Q219/Q220	BKTC3198Y(KTC1815Y), NPN	2208606104	2
	RESISTORS		
R101L/R	Carbon Film 1 kohm 1/5 W J	3069102970	2
R102L/R	Carbon Film 1 kohm 1/5 W J	3069102970	2
R103L/R	Carbon Film 1 kohm 1/5 W J	3069102970	2
R104L/R	Carbon Film 1 kohm 1/5 W J	3069102970	2
R105L/R	Carbon Film 1 kohm 1/5 W J	3069102970	2
R106L/R	Carbon Film 1 kohm 1/5 W J	3069102970	2
R107	Carbon Film 1 kohm 1/5 W J	3069102970	1
R108	Carbon Film 150 ohm 1/5 W J	3069151970	1
R109	Carbon Film 100 kohm 1/5 W J	3069104970	1
R110	Carbon Film 150 ohm 1/5 W J	3069151970	1
R111L/R	Carbon Film 100 kohm 1/5 W J	3069104970	2
R112L/R	Carbon Film 220 kohm 1/5 W J	3069224970	2
R113L/R	Carbon Film 220 kohm 1/5 W J	3069224970	2
R114/R115	Carbon Film 100 kohm 1/5 W J	3069104970	2
R122L/R	Carbon Film 1 kohm 1/5 W J	3069102970	2
R123	Carbon Film 150 ohm 1/5 W J	3069151970	1
R151	Carbon Film 3.9 kohm 1/5 W J	3069392970	1
R152	Carbon Film 3.3 kohm 1/5 W J	3069332970	1
R153	Carbon Film 100 ohm 1/5 W J	3069101970	1
R154	Carbon Film 47 ohm 1/5 W J	3069470970	1
R155	Carbon Film 47 kohm 1/5 W J	3069473970	1
R156	Carbon Film 270 ohm 1/5 W J	3069271970	1
R161L/R	Carbon Film 100 kohm 1/5 W J	3069104970	2
R162L/R	Carbon Film 1 Mohm 1/5 W J	3069105970	2
R163L/R	Carbon Film 220 kohm 1/5 W J	3069224970	2
R164L/R	Carbon Film 15 kohm 1/5 W J	3069153970	2
R165L/R	Carbon Film 2.4 kohm 1/5 W J	3069242970	2
R166L/R	Carbon Film 33 ohm 1/5 W J	3069330970	2
R167L/R	Carbon Film 33 ohm 1/5 W J	3069330970	2
R168L/R	Carbon Film 10 ohm 1/5 W J	3069100970	2
R169L/R	Carbon Film 100 ohm 1/5 W J	3069101970	2

Ref. No.	Description					Mfr. Part No.	Q'ty
R181	Carbon Film	3.3	kohm	1/5 W	J	3069332970	1
R182-R185	Carbon Film	47	kohm	1/5 W	J	3069473970	4
R186/R187	Carbon Film	3.3	kohm	1/5 W	J	3069332970	2
R188L/R	Metal Film	47	ohm	1 W	J	3029470470	2
R189L/R	Metal Film	47	ohm	1 W	J	3029470470	2
R191/R192	Carbon Film	4.7	kohm	1/5 W	J	3069472970	2
R194	Carbon Film	3.3	kohm	1/5 W	J	3069332970	1
R200	Carbon Film	150	kohm	1/5 W	J	3069154970	2
R201L/R	Carbon Film	330	ohm	1/5 W	J	3069331970	2
R202L/R	Carbon Film	3.3	kohm	1/5 W	J	3069332970	2
R203L/R	Carbon Film	33	kohm	1/5 W	J	3069333970	2
R204L/R	Carbon Film	33	kohm	1/5 W	J	3069333970	2
R205L/R	Carbon Film	10	kohm	1/5 W	J	3069103970	2
R206L/R	Carbon Film	270	ohm	1/5 W	J	3069271970	2
R207L/R	Carbon Film	390	ohm	1/5 W	J	3069391970	2
R208L/R	Carbon Film	390	ohm	1/5 W	J	3069391970	2
R209L/R	Carbon Film	1.5	kohm	1/5 W	J	3069152970	2
R210L/R	Carbon Film	1.5	kohm	1/5 W	J	3069152970	2
R211L/R	Carbon Film	1.8	kohm	1/5 W	J	3069182970	2
R212L/R	Carbon Film	560	ohm	1/5 W	J	3069561970	2
R213L/R	Carbon Film	560	ohm	1/5 W	J	3069561970	2
R214L/R	Carbon Film	560	ohm	1/5 W	J	3069561970	2
R215L/R	Carbon Film	560	ohm	1/5 W	J	3069561970	2
R216L/R	Carbon Film	560	ohm	1/5 W	J	3069561970	2
R217L/R	Carbon Film	560	ohm	1/5 W	J	3069561970	2
R218L/R	Carbon Film	4.7	kohm	1/5 W	J	3069472970	2
R219L/R	Carbon Film	22	kohm	1/5 W	J	3069223970	2
R220L/R	Carbon Film	22	kohm	1/5 W	J	3069223970	2
R221L/R	Metal Film	1.21	kohm	1/4 W	F	3027121125	2
R222L/R	Metal Film	442	ohm	1/4 W	F	3027442025	2
R223L/R	Carbon Film	82	ohm	1/5 W	J	3069820970	2
R224L/R	Carbon Film	82	ohm	1/5 W	J	3069820970	2
R225L/R	Carbon Film	82	ohm	1/5 W	J	3069820970	2
⚠ R226L/R	Cement	0.27	ohm	5 W	J	3059027776	2
⚠ R227L/R	Cement	0.27	ohm	5 W	J	3059027776	2
R228L/R	Carbon Film	1.8	kohm	1/5 W	J	3069182970	2
R229L/R	Carbon Film	1.5	kohm	1/5 W	J	3069152970	2
R230L/R	Carbon Film	910	ohm	1/5 W	J	3069911970	2
R231L/R	Carbon Film	6.8	kohm	1/5 W	J	3069682970	2
R232L/R	Carbon Film	22	ohm	1/5 W	J	3069220970	2
R233L/R	Carbon Film	22	ohm	1/5 W	J	3069220970	2
R234L/R	Carbon Film	24	kohm	1/5 W	J	3069243970	2
R235L/R	Metal Film	10	ohm	1 W	J	3029100470	2
R236	Carbon Film	68	kohm	1/5 W	J	3069683970	1
R237	Carbon Film	100	kohm	1/5 W	J	3069104970	1
R238	Carbon Film	3.3	kohm	1/5 W	J	3069332970	1
R239	Carbon Film	1.5	kohm	1/5 W	J	3069152970	1
R240	Carbon Film	22	kohm	1/5 W	J	3069223970	1
R241	Carbon Film	15	kohm	1/5 W	J	3069153970	1
R242	Carbon Film	10	kohm	1/5 W	J	3069103970	1
R243	Carbon Film	4.7	kohm	1/5 W	J	3069472970	1
R244	Carbon Film	1	kohm	1/5 W	J	3069102970	1
R245	Carbon Film	6.8	kohm	1/5 W	J	3069682970	1
R246L/R	Carbon Film	33	kohm	1/5 W	J	3069333970	2
	MISCELLANEOUS						
	Terminal Ground					4235007310	2
	Clip Fuse					4255001010	4
32	Jack, RCA, 6P					4438103210	1
33	Jack, RCA, 4P					4438103110	2
34	Jack, Multi, 2P					4438007510	1
35	Terminal Speaker, 4P, Screw Type					4408108610	1
PCB2	**ASSEMBLY P.C.BOARD TONE**						
	CAPACITORS						
C122L/R	Electrolytic SG	47	µF	16 V	M	3479347031	2
C123L/R	Electrolytic SG	4.7	µF	50 V	M	3479347971	2
C124L/R	Ceramic Tubular	47	pF	50 V	J	3519470935	2
C125L/R	Electrolytic SG	4.7	µF	50 V	M	3479347971	2
C126L/R	Mylar	0.027	µF	100 V	J	3679273120	2
C127L/R	Mylar	0.0033	µF	100 V	J	3679332120	2
C128L/R	Mylar	0.15	µF	63V	K	3679154297	2
C129L/R	Mylar	0.018	µF	100 V	J	3679183120	2
C130L/R	Ceramic Tubular	330	pF	50 V	K	3519331935	2
	CONNECTOR						
CNT116-1	Lead Ass'y, 8P, 120mm					436208123332	1
	INTEGRATED CIRCUIT						
IC105	KIA4559P (KIA75559P), OP Amp					2168206104	1
	RESISTORS						
R124	Carbon Film	150	ohm	1/5 W	J	3069151970	1
R121L/R	Carbon Film	100	kohm	1/5 W	J	3069104970	2

Ref. No.	Description					Mfr. Part No.	Q'ty
R125L/R	Carbon Film	100	kohm	1/5 W	J	3069104970	2
R126L/R	Carbon Film	270	kohm	1/5 W	J	3069274970	2
R127L/R	Carbon Film	1	Mohm	1/5 W	J	3069105970	2
R128L/R	Carbon Film	1	kohm	1/5 W	J	3069102970	2
R129L/R	Carbon Film	18	kohm	1/5 W	J	3069183970	2
R130L/R	Carbon Film	1	kohm	1/5 W	J	3069102970	2
R131L/R	Carbon Film	3.9	kohm	1/5 W	J	3069392970	2
R132L/R	Carbon Film	620	ohm	1/5 W	J	3069621970	2
	MISCELLANEOUS						
15	Volume, Bass/Treble					3208068910	2
16	Volume, Balance					3208068810	1
17	Shield Fence, Tone					6165149710	1
PCB3	**ASSEMBLY P.C.BOARD FRONT**						
	CAPACITORS						
C710/C711	Mylar	0.047	µF	100 V	J	3679473120	2
C712	Back-Up	0.047	µF	5.5 V	M	3439247315	1
C713	Electrolytic SG	47	µF	10 V	M	3479347021	1
C714	Electrolytic SG	1	µF	50 V	M	3479310971	1
C716	Electrolytic SG	10	µF	50 V	M	3479310071	1
C717	Electrolytic SG	100	µF	50 V	M	3479310171	1
C720	Ceramic Disc	0.022	µF	50 V	Z	3519223530	1
C721	Electrolytic SG	0.47	µF	50 V	M	3479347871	1
	DIODES						
D701	UZ 4.3BSB					2258599102	1
D704-D709	1N4148, Switching					2058322101	6
D710/D711	UZ 16.0BSD					2258599117	2
D712	UZ 9.1BSC					2258599107	1
D713	1N4002, Rectifier					2258100135	1
D714	1N4148, Switching					2058322101	1
D716	1N4148, Switching					2058322101	1
	FIP						
FL700	FL Display CM1361C					2328002306	1
	INTEGRATED CIRCUIT						
IC701	CXP82316, CPU					2138322189	1
	TRANSISTORS						
Q701	BKTC3198Y(KTC1815Y), NPN					2208606104	1
Q702	BKTC3198Y(KTC1815Y), NPN					2208606104	1
	RESISTORS						
R708	Carbon Film	4.7	kohm	1/5 W	J	3069472970	1
R710	Carbon Film	4.7	kohm	1/5 W	J	3069472970	1
R713H	Carbon Film	47	kohm	1/5 W	J	3069473970	1
R714L	Carbon Film	47	kohm	1/5 W	J	3069473970	1
R715H	Carbon Film	47	kohm	1/5 W	J	3069473970	1
R716L	Carbon Film	47	kohm	1/5 W	J	3069473970	1
R717	Carbon Film	470	ohm	1/5 W	J	3069471970	1
R718	Carbon Film	3.3	kohm	1/5 W	J	3069332970	1
R720	Carbon Film	100	kohm	1/5 W	J	3069104970	1
R721	Carbon Film	330	ohm	1/5 W	J	3069331970	1
R722	Carbon Film	3.3	kohm	1/5 W	J	3069332970	1
R723	Carbon Film	47	kohm	1/5 W	J	3069473970	1
R725	Carbon Film	100	ohm	1/5 W	J	3069101970	1
R726	Carbon Film	10	kohm	1/5 W	J	3069103970	1
R729	Carbon Film	330	ohm	1/5 W	J	3069331970	1
R730	Carbon Film	100	kohm	1/5 W	J	3069104970	1
R731	Carbon Film	15	kohm	1/5 W	J	3069153970	1
R732	Carbon Film	100	kohm	1/5 W	J	3069104970	1
R733	Metal Film	390	ohm	1 W	J	3029391470	1
R734/R735	Carbon Film	100	kohm	1/5 W	J	3069104970	2
R745	Carbon Film	1	kohm	1/5 W	J	3069102970	1
	REMOTE SENSOR						
RMC1	TEMT5380(38 kHz)					2408005001	1
	RESONATOR						
X700	CST10MTW-TF01					3938124010	1
	CONNECTORS						
CNT105-1	Wafer, 5P, Angle					4428513450	1
CNT107-1	Wafer FPC, 25P					4428525826	1
CNT701	Wafer, 2P, Angle					4428513420	1
	MISCELLANEOUS						
21	Holder FL					6043010210	1
20	Switch, Tact					4658004810	9
PCB4	**ASSEMBLE P.C.BOARD VCR2**						
C704	Ceramic Disc.	0.1	µF	50V	Z	3579104530	1

Ref. No.	Description					Mfr. Part No.	Q'ty
C707/C708	Ceramic Tubular	100	pF	50 V	K	3519101935	2
C709	Electrolytic SG	33	µF	16 V	M	3479333031	1
R709	Carbon Film	75	ohm	1/5 W	J	3069750970	1
R711/R712	Carbon Film	1	kohm	1/5 W	J	3069102970	2
CNT113-1	Wafer, 5P, Angle					4428525550	1
18	Jack, RCA, 3P, VCR					4438109710	1
PCB5	**ASSEMBLY P. C. BOARD HEADPHONE**						
	CAPACITORS						
C715	Ceramic Disc.	0.1	µF	50V	Z	3579104530	1
C718	SPK-Killer	0.0047	µF	400V		3548472340	1
C719L/R	Ceramic Disc.	0.047	µF	50 V	Z	3579473530	2
	TRANSISTORS						
Q703/Q704	DTC114YS					2208622106	2
	RESISTORS						
R703	Carbon Film	2	kohm	1/5 W	J	3069202970	1
R704	Carbon Film	10	kohm	1/5 W	J	3069103970	1
R719	Carbon Film	10	kohm	1/5 W	J	3069103970	1
R728L/R	Carbon Film	100	ohm	1/5 W	J	3069101970	2
	CONNECTORS						
CNT111-1	Lead Ass'y, 5P, 280mm					436205283332	1
CNT122-1	Lead Ass'y, 2P, 300mm, LV Type					4358850230	1
	MISCELLANEOUS						
11	Jack, Phone, Push Type					4438004510	1
12	Switch, Power, Push Type					4628055910	1
PCB6	**ASSEMBLY P. C. BOARD POWER LED**						
D702/D703	SLR-34GC, Green					2371124701	2
CNT701-1	Lead Ass'y, 2P, 180mm					436102183331	1
PCB7	**ASSEMBLY P.C BOARD OUTLET**						
⚠ F700	Jumper					1508400602	1
⚠ F701	NB 125 V, 4 A					5508202921	1
R724	Carbon Film	3.3	Mohm	1/2 W	J	3029335380	1
CNT101-1	Pin Base, 2P					4428525780	1
CNT122	Pin Base, 2P					4428525780	1
	Clip Fuse					4255001010	2
	Pin Solder					4228001410	2
	Terminal Ground					4235007310	1
⚠ 43	Outlet AC					4448104810	1
PCB8	**ASSEMBLY P. C. BOARD VOLUME**						
	CAPACITORS						
C700	Electrolytic SG	10	µF	50 V	M	3479310071	1
C701	Electrolytic SG	100	µF	10 V	M	3479310121	1
C702	Electrolytic SG	100	µF	16 V	M	3479310131	1
C703	Electrolytic SG	100	µF	10 V	M	3479310121	1
	INTEGRATED CIRCUIT						
IC700	TA7291S					2168007204	1
	TRANSISTOR						
Q700	DTC114TS					2208622108	1
	RESISTORS						
R700	Carbon Film	680	ohm	1/5 W	J	3069681970	1
R701/R702	Carbon Film	1	kohm	1/5 W	J	3069102970	2
R705	Carbon Film	4.7	ohm	1/5 W	J	3069479970	1
R706	Carbon Film	10	kohm	1/5 W	J	3069103970	1
R707	Carbon Film	3	kohm	1/5 W	J	3069302970	1
	CONNECTORS						
CNT114-1	Wafer, 13P					4428551320	1
CNT700	Wafer, 2P					4428508210	1
	MISCELLANEOUS						
19	Volume, Motor, 50 k(A)					3228020010	1
PCB9	**ASSEMBLY P. C. B ST-BY LED**						
D700	SLR 40MG3, Green					2308220324	1
CNT700-1	Lead Ass'y, 2P, 180mm					435102183181	1
PCB10	**ASSEMBLY P. C. BOARD SURROUND**						
	CAPACITORS						
C301	Mylar	0.047	µF	100 V	J	3679473120	1

Ref. No.	Description					Mfr. Part No.	Q'ty
C302/C303	Mylar	0.1	µF	63V	K	3679104297	2
C304	Poly	680	pF	50 V	J	3615681110	1
C305	Mylar	0.047	µF	100 V	J	3679473120	1
C306	Electrolytic SG	22	µF	50 V	M	3479322071	1
C307-C309	Electrolytic SG	10	µF	50 V	M	3479310071	3
C310	Electrolytic SG	22	µF	50 V	M	3479322071	1
C311	Mylar	0.0047	µF	100 V	J	3679472120	1
C312	Electrolytic SG	0.47	µF	50 V	M	3479347871	1
C313/C314	Electrolytic SG	4.7	µF	50 V	M	3479347971	2
C315	Electrolytic SG	0.22	µF	50 V	M	3479322871	1
C316	Electrolytic SG	10	µF	50 V	M	3479310071	1
C317	Electrolytic SG	220	µF	16 V	M	3479322131	1
C318/C319	Electrolytic SG	4.7	µF	50 V	M	3479347971	2
C320	Mylar	0.0056	µF	100V	J	3679562120	1
C321	Electrolytic SG	220	µF	10 V	M	3479322121	1
C322	Mylar	0.047	µF	100 V	J	3679473120	1
C323	Ceramic Disc	470	pF	50 V	K	3579471130	1
C324	Mylar	0.047	µF	100 V	J	3679473120	1
C325	Mylar	0.0056	µF	100V	J	3679562120	1
C326	Mylar	0.68	µF	63V	K	3679684297	1
C327-C329	Mylar	0.22	µF	63V	K	3679224297	3
C330/C331	Electrolytic SG	4.7	µF	50 V	M	3479347971	2
C332	Mylar	0.22	µF	63V	K	3679224297	1
C333-C336	Mylar	0.1	µF	63V	K	3679104297	4
C337/C338	Mylar	0.022	µF	100V	J	3679223120	2
C339/C340	Mylar	0.1	µF	63V	K	3679104297	2
C341	Poly	680	pF	50 V	J	3615681110	1
C342	Electrolytic SG	100	µF	10 V	M	3479310121	1
C343	Ceramic Tubular	0.1	µF	50 V	K	3519104935	1
C344	Electrolytic SG	100	µF	10 V	M	3479310121	1
C345/C346	Ceramic Disc	270	pF	50 V	K	3579271130	2
C347	Ceramic Tubular	100	pF	50 V	K	3519101935	1
C348/C349	Mylar	0.0056	µF	100 V	J	3679562120	2
C350	Ceramic Disc	470	pF	50 V	K	3579471130	1
C351	Mylar	0.1	µF	63V	J	3679104297	1
C352	Electrolytic SG	47	µF	16 V	M	3479347031	1
C353/C354	Mylar	0.047	µF	100 V	J	3679473120	2
C355	Mylar	0.1	µF	63V	J	3679104297	1
C356	Ceramic Disc	470	pF	50 V	K	3579471130	1
C357	Electrolytic SG	1	µF	50 V	M	3479310971	1
C358/C359	Electrolytic SG	47	µF	16 V	M	3479347031	2
C360/C361	Ceramic Tubular	0.1	µF	50 V	K	3519104935	2
C362	Ceramic Tubular	100	pF	50 V	K	3519101935	1
C363/C364	Electrolytic SG	47	µF	16 V	M	3479347031	2
C365	Electrolytic SG	4.7	µF	50 V	M	3479347971	1
C366	Ceramic Tubular	100	pF	50 V	K	3519101935	1
C367	Ceramic Disc	680	pF	50 V	J	3519681935	1
C368	Electrolytic SG	4.7	µF	50 V	M	3479347971	1
C369	Electrolytic SG	0.47	µF	50 V	M	3479347871	1
C370	Ceramic Tubular	100	pF	50 V	K	3519101935	1
C371	Ceramic Tubular	680	pF	50 V	J	3519681935	1
C372	Electrolytic SG	0.47	µF	50 V	M	3479347871	1
C373/C374	Electrolytic SG	47	µF	16 V	M	3479347031	2
C375L/R	Electrolytic SG	4.7	µF	50 V	M	3479347971	2
C376L/R	Ceramic Tubular	100	pF	50 V	K	3519101935	2
C377L/R	Electrolytic SG	4.7	µF	50 V	M	3479347971	2
C378L/R	Ceramic Tubular	33	pF	50 V	K	3519330935	2
C380	Mylar	0.0033	µF	100 V	J	3679332120	1
	DIODES						
D301/D302	1N4148, Switching					2058322101	2
	INTEGRATED CIRCUITS						
IC301	NJM2177AFB3					2169020000	1
IC302	NJU9701, Delay					2168020114	1
IC303	TC9299					2168007210	1
IC304/IC305	KIA4559P (KIA75559P), OP Amp					2168206104	2
	TRANSISTORS						
Q301/Q302	DTC114YS					2208622106	2
Q303-Q305	KRA107M(DTA114YS)					2238006103	2
Q306/Q307	2SD1302, NPN					2208606112	2
	RESISTORS						
R301	Carbon Film	7.5	kohm	1/5 W	J	3069752970	1
R302	Carbon Film	47	kohm	1/5 W	J	3069473970	1
R303	Carbon Film	15	kohm	1/5 W	J	3069153970	1
R304	Carbon Film	4.7	Mohm	1/5 W	J	3069475970	1
R305/R306	Carbon Film	22	kohm	1/5 W	J	3069223970	2
R307-R309	Carbon Film	100	kohm	1/5 W	J	3069104970	3
R310	Carbon Film	10	kohm	1/5 W	J	3069103970	1
R311	Carbon Film	68	ohm	1/5 W	J	3069680970	1
R312	Carbon Film	100	kohm	1/5 W	J	3069104970	1
R314	Carbon Film	100	kohm	1/5 W	J	3069104970	1
R315	Carbon Film	15	kohm	1/5 W	J	3069153970	1

Ref. No.	Description	Mfr. Part No.	Q'ty
R316/R317	Carbon Film 8.2 kohm 1/5 W J	3069822970	2
R318	Carbon Film 6.8 kohm 1/5 W J	3069682970	1
R319	Carbon Film 330 kohm 1/5 W J	3069334970	1
R320	Carbon Film 7.5 kohm 1/5 W J	3069752970	1
R321	Carbon Film 47 kohm 1/5 W J	3069473970	1
R322	Carbon Film 15 kohm 1/5 W J	3069153970	1
R323	Carbon Film 56 ohm 1/5 W J	3069560970	1
R324	Carbon Film 47 ohm 1/5 W J	3069470970	1
R325	Carbon Film 1 Mohm 1/5 W J	3069105970	1
R326/R327	Carbon Film 1 kohm 1/5 W J	3069102970	2
R328	Carbon Film 8.2 kohm 1/5 W J	3069822970	1
R329	Carbon Film 7.5 kohm 1/5 W J	3069752970	1
R330	Carbon Film 18 kohm 1/5 W J	3069183970	1
R331	Carbon Film 5.6 kohm 1/5 W J	3069562970	1
R332/R333	Carbon Film 22 ohm 1/5 W J	3069220970	2
R334	Carbon Film 15 kohm 1/5 W J	3069153970	1
R335	Carbon Film 18 kohm 1/5 W J	3069183970	1
R336	Carbon Film 15 kohm 1/5 W J	3069153970	1
R338/R339	Carbon Film 150 ohm 1/5 W J	3069151970	2
R340-R342	Carbon Film 1 kohm 1/5 W J	3069102970	3
R343/R344	Carbon Film 150 ohm 1/5 W J	3069151970	2
R346	Carbon Film 100 kohm 1/5 W J	3069104970	1
R347	Carbon Film 8.2 kohm 1/5 W J	3069822970	1
R348	Carbon Film 1.8 kohm 1/5 W J	3069182970	1
R349	Carbon Film 100 kohm 1/5 W J	3069104970	1
R351	Carbon Film 47 kohm 1/5 W J	3069473970	1
R352	Carbon Film 8.2 kohm 1/5 W J	3069822970	1
R353	Carbon Film 1.8 kohm 1/5 W J	3069182970	1
R354	Carbon Film 10 kohm 1/5 W J	3069103970	1
R355/R356	Carbon Film 150 ohm 1/5 W J	3069151970	2
R358L/R	Carbon Film 100 kohm 1/5 W J	3069104970	2
R359L/R	Carbon Film 1.5 kohm 1/5 W J	3069152970	2
R360L/R	Carbon Film 9.1 kohm 1/5 W J	3069912970	2
R361L/R	Carbon Film 100 kohm 1/5 W J	3069104970	2
R362L/R	Carbon Film 1 kohm 1/5 W J	3069102970	2
R363/R364	Carbon Film 3.3 kohm 1/5 W J	3069332970	2
R365	Carbon Film 1 kohm 1/5 W J	3069102970	1
R366-R368	Carbon Film 10 kohm 1/5 W J	3069104970	3
	RESONATOR		
X301	CSA2.00MG	3938131740	1
	CONNECTORS		
CNT108-1	Wafer, 15P	4428560150	1
CNT109-1	Wafer, 15P	4428560150	1
	MISCELLANEOUS		
31	Jack, RCA, 6P	4438108010	1

PCB11 ASSEMBLY P. C. BOARD SURROUND AMP

	CAPACITORS						
C401	Electrolytic SG	47	µF	16 V	M	3479347031	1
C402	Ceramic Tubular	100	pF	50 V	K	3519101935	1
C403	Electrolytic SG	1	µF	50 V	M	3479310971	1
C404	Electrolytic SG	47	µF	25 V	M	3479347041	1
C405	Ceramic Tubular	47	pF	50 V	K	3519470935	1
C406	Electrolytic SG	10	µF	50 V	M	3479310071	1
C407	Electrolytic SG	4.7	µF	50 V	M	3479347971	1
C408	Mylar	0.068	µF	100 V	J	3679683120	1
C409	Mylar	0.047	µF	100 V	J	3679473120	1
C410	Electrolytic SG	47	µF	16 V	M	3479347031	1
C411	Ceramic Tubular	100	pF	50 V	K	3519101935	1
C412	Electrolytic SG	1	µF	50 V	M	3479310971	1
C413	Electrolytic SG	47	µF	25 V	M	3479347041	1
C414	Ceramic Tubular	47	pF	50 V	K	3519470935	1
C415	Electrolytic SG	10	µF	50 V	M	3479310071	1
C416	Electrolytic SG	4.7	µF	50 V	M	3479347971	1
C417	Mylar	0.068	µF	100 V	J	3679683120	1
C419	Electrolytic SG	220	µF	50 V	M	3409322179	1
C471	Electrolytic SG	220	µF	50 V	M	3409322179	1
	DIODES						
D401/D402	1N4148, Switching					2058322101	2
	TRANSISTORS						
Q401	DTC114YS					2208622106	1
Q402	KTA1266Y(KTA1015Y), PNP					2208206105	1
Q403-Q405	KTA1268/KTA970, PNP					2208206104	3
Q406/Q407	KTC3200BL(KTC2240BL), NPN					2208606108	2
Q408	KTA1024Y(BKTA949Y), PNP					2208206102	1
Q409	KTC3206Y(BKTC2229Y), NPN					2208606107	1
Q410	2SC4137, NPN, Bias					2008622110	1
Q411	KSC2690AY, NPN					2008602102	1
Q412	KSA1220AY, PNP					2008202101	1
⚠ Q413	KTD718(2SD718), NPN					2028407109	1
⚠ Q414	KTB688(2SB688), PNP					2028107106	1
Q415	BKTC3198Y(KTC1815Y), NPN					2208606104	1
Q416	KTA1266Y(KTA1015Y), PNP					2208206105	1
Q417-Q419	KTA1268/KTA970, PNP					2208206104	3
Q420/Q421	BKTC3200BL(KTC2240BL), NPN					2208606108	2
Q422	KTA1024Y(BKTA949Y), PNP					2208206102	1
Q423	KTC3206Y(BKTC2229Y), NPN					2208606107	1
Q424	2SC4137, NPN, Bias					2008622110	1
Q425	KSC2690AY, NPN					2008602102	1
Q426	KSA1220AY, PNP					2008202101	1
⚠ Q427	KTD718(2SD718), NPN					2028407109	1
⚠ Q428	KTB688(2SB688), PNP					2028107106	1
Q429	BKTC3198Y(KTC1815Y), NPN					2208606104	1
Q430	KRA107M(DTA114YS)					2238006103	1
Q431	2SD1302, NPN					2208606112	1
Q432	KRA107M(DTA114YS)					2238006103	1
Q433	2SD1302, NPN					2208606112	1
	RESISTORS						
R401	Carbon Film 1 kohm 1/5 W J					3069102970	1
R402/R403	Carbon Film 33 kohm 1/5 W J					3069333970	2
R404	Carbon Film 10 kohm 1/5 W J					3069103970	1
R405	Carbon Film 270 ohm 1/5 W J					3069271970	1
R406/R407	Carbon Film 390 ohm 1/5 W J					3069391970	2
R408	Carbon Film 1 kohm 1/5 W J					3069102970	1
R409/R410	Carbon Film 1.5 kohm 1/5 W J					3069152970	2
R411-R415	Carbon Film 560 ohm 1/5 W J					3069561970	5
R416/R417	Carbon Film 82 ohm 1/5 W J					3069820970	2
R418/R419	Carbon Film 22 kohm 1/5 W J					3069223970	2
R420	Carbon Film 470 ohm 1/5 W J					3069471970	1
R421	Carbon Film 1.2 kohm 1/5 W J					3069122970	1
R422	Carbon Film 82 ohm 1/5 W J					3069820970	1
R423/R424	Cement 0.27 ohm 5 W J					3059278782	2
R425	Carbon Film 1.8 kohm 1/5 W J					3069182970	1
R426	Carbon Film 1.5 kohm 1/5 W J					3069152970	1
R427	Carbon Film 910 ohm 1/5 W J					3069911970	1
R428	Carbon Film 6.8 kohm 1/5 W J					3069682970	1
R431	Carbon Film 24 kohm 1/5 W J					3069243970	1
R433	Carbon Film 1 kohm 1/5 W J					3069102970	1
R434/R435	Carbon Film 33 kohm 1/5 W J					3069333970	2
R436	Carbon Film 10 kohm 1/5 W J					3069103970	1
R437	Carbon Film 270 ohm 1/5 W J					3069271970	1
R438/R439	Carbon Film 390 ohm 1/5 W J					3069391970	2
R440	Carbon Film 1 kohm 1/5 W J					3069102970	1
R441/R442	Carbon Film 1.5 kohm 1/5 W J					3069152970	2
R443-R447	Carbon Film 560 ohm 1/5 W J					3069561970	5
R448/R449	Carbon Film 82 ohm 1/5 W J					3069820970	2
R450/R451	Carbon Film 22 kohm 1/5 W J					3069223970	2
R452	Carbon Film 470 ohm 1/5 W J					3069471970	1
R453	Carbon Film 1.2 kohm 1/5 W J					3069122970	1
R454	Carbon Film 82 ohm 1/5 W J					3069820970	1
⚠ R455/R456	Cement 0.27 ohm 5 W J					3059278782	2
R457	Carbon Film 1.8 kohm 1/5 W J					3069182970	1
R458	Carbon Film 1.5 kohm 1/5 W J					3069152970	1
R459	Carbon Film 910 ohm 1/5 W J					3069911970	1
R460	Carbon Film 6.8 kohm 1/5 W J					3069682970	1
R463	Carbon Film 24 kohm 1/5 W J					3069243970	1
R465/R466	Carbon Film 33 kohm 1/5 W J					3069333970	2
R467/R468	Carbon Film 3.3 kohm 1/5 W J					3069332970	2
R469	Carbon Film 150 kohm 1/5 W J					3069154970	1
R470/R471	Metal Film 47 ohm 1 W J					3029470470	2
	CONNECTORS						
CNT110-1	Wafer, 15P					4428561520	1
CNT117	Lead Ass'y, 2P, 120mm					436102123321	1

PCB12 ASSEMBLY P. C. BOARD CENTER SPEAKER

CF401/402	Ceramic Tubular	0.0047	µF	50 V	K	3519472935	2
R429/R430	Carbon Film	22	ohm	1/5 W	J	3069220970	2
R432	Metal Film	10	ohm	1 W	J	3029100470	1
L401	Inductor, 0.5 uH					2648001010	1
CNT117-1	Wafer, 2P					4428508210	1
36	Terminal Speaker, 2P, Screw Type					4408108710	1

PCB13 ASSEMBLY P. C. BOARD REAR SPEAKER

CF403	Ceramic Tubular	3300	pF	50 V	K	3519332935	1
C418	Mylar	0.047	µF	100 V	J	3679473120	1
R461/R462	Carbon Film	22	ohm	1/5 W	J	3069220970	2
R464	Metal Film	10	ohm	1 W	J	3029100470	1
L402	Inductor, 0.5 uH					2648001010	1
38	Terminal Speaker, Rear, 4P					4408108910	1

Ref. No.	Description					Mfr. Part No.	Q'ty
PCB14	ASSEMBLY P.C BOARD VIDEO						
	CAPACITORS						
C501	Ceramic Tubular	5	pF	50 V	D	3519050935	1
C502	Electrolytic SG	33	μF	16 V	M	3479333031	1
C503	Ceramic Tubular	5	μF	50 V	D	3519050935	1
C504/C505	Electrolytic SG	470	μF	10 V	M	3479347121	2
C506	Electrolytic SG	100	μF	10 V	M	3479310121	1
C507	Ceramic Tubular	0.1	μF	50 V	Z	3519104935	1
	INTEGRATED CIRCUIT						
IC501	GD4066B					2138001101	1
	TRANSISTORS						
Q501	BKTC3198Y(KTC1815Y), NPN					2208606104	1
Q502	KTA1266Y(KTA1015Y), PNP					2208206105	1
Q503	BKTC3198Y(KTC1815Y), NPN					2208606104	1
Q504	KTA1266Y(KTA1015Y), PNP					2208206105	1
	RESISTORS						
R501	Carbon Film	8.2	kohm	1/5 W	J	3069822970	1
R502	Carbon Film	12	kohm	1/5 W	J	3069123970	1
R503	Carbon Film	150	ohm	1/5 W	J	3069151970	1
R504/R505	Carbon Film	1.2	kohm	1/5 W	J	3069122970	2
R506	Carbon Film	180	ohm	1/5 W	J	3069181970	1
R507	Carbon Film	75	ohm	1/5 W	J	3069750970	1
R508	Carbon Film	12	kohm	1/5 W	J	3069123970	1
R509	Carbon Film	8.2	kohm	1/5 W	J	3069822970	1
R510	Carbon Film	1.2	kohm	1/5 W	J	3069122970	1
R511	Carbon Film	150	ohm	1/5 W	J	3069151970	1
R512	Carbon Film	1.2	kohm	1/5 W	J	3069122970	1
R513	Carbon Film	180	ohm	1/5 W	J	3069181970	1
R514/R515	Carbon Film	75	ohm	1/5 W	J	3069750970	2
R516	Carbon Film	100	ohm	1/5 W	J	3069101970	1
R517/R518	Carbon Film	100	kohm	1/5 W	J	3069104970	2
	MISCELLANEOUS						
37	Jack, RCA, VCR, 3P					4438114310	1
CNT112-1	Connector, Wafer, 6P					4438302927	1

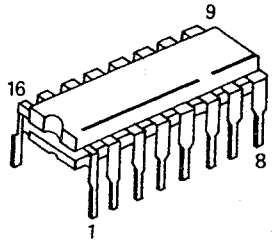
1. This parts list for AVI100 230V version is based on 120V version.
2. Each initial in the Remark is denoted as follows.
   C: Changed, D: Deleted, A: Added

Ref. No	Description		Mfr. Part No.	Q'ty	Remark
PCB7	ASS'Y P.C BOARD OUTLET				
	FUSE				
⚠ F700	T 250 V, 1 A		5508302035	1	C
⚠ F701	T 250 V, 2.5 A		5508302535	1	C
	RESISTOR				
R724	Carbon Film	3.3 Mohm 1/2 W J	3029335380	0	D
	MISCELLANEOUS				
⚠ 43	Outlet, AC		4448103610	1	C

SEMICONDUCTOR LEAD IDENTIFICATION & INTERNAL DIAGRAM

LC7821 : IC101

Package Outline



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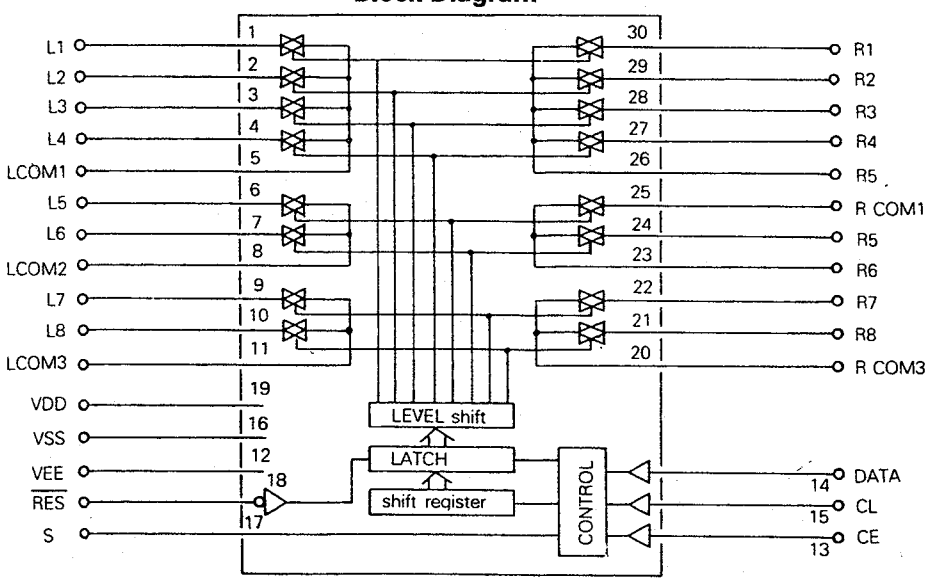
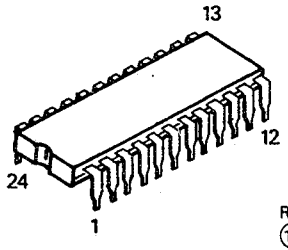


NJU9701 : IC302

Package Outline



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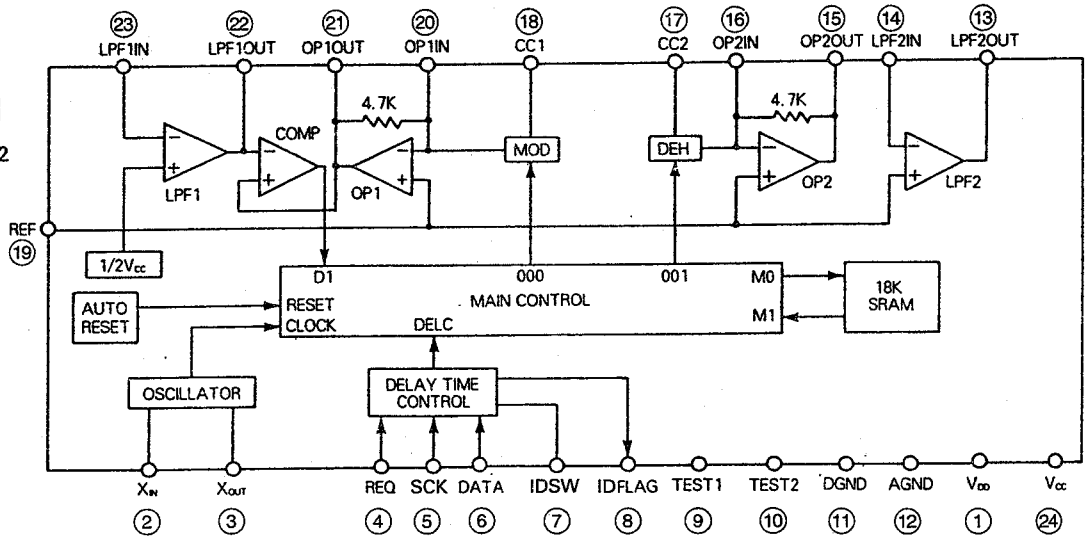
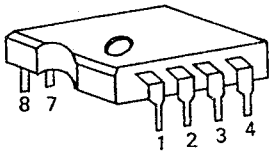


(KIA 4559P/KIA75559P)
IC102, IC105, IC304, IC305,

Package Outline



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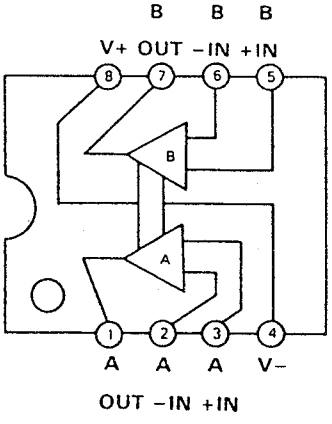
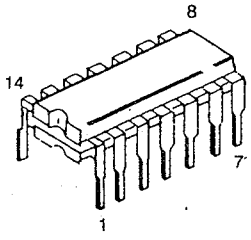


LC4966B : IC103

Package Outline



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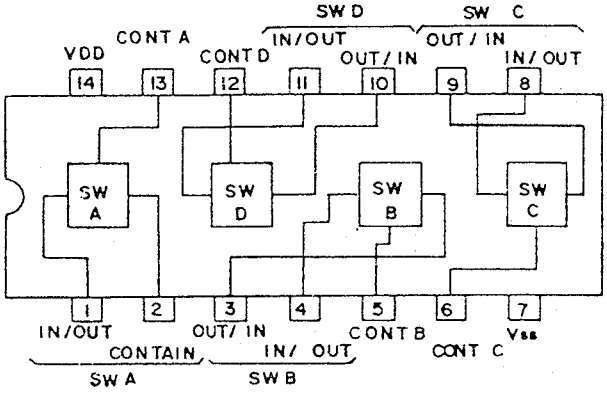

TC9299P : IC303

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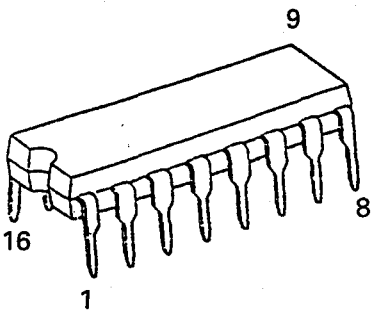

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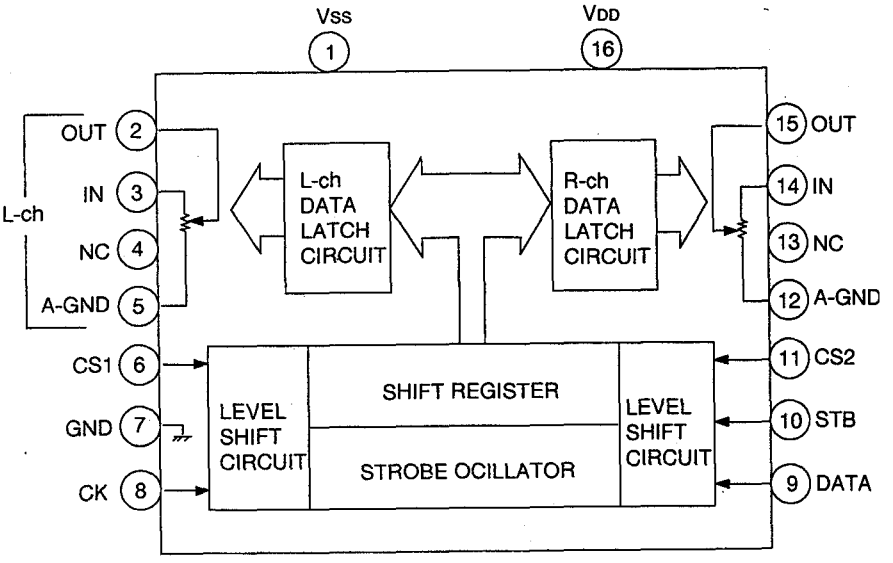
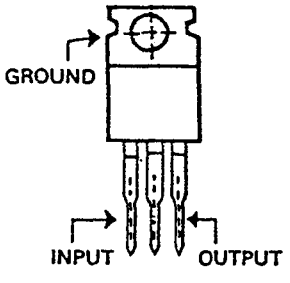


GD78XX : IC105

Fironf View



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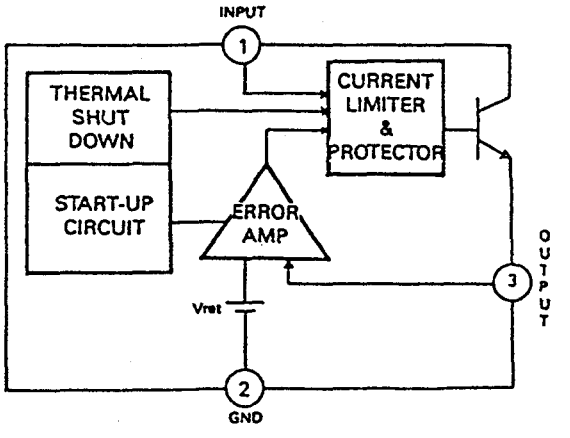
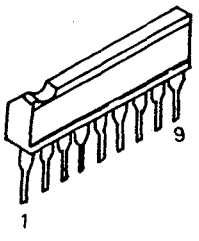


TA7291S : IC700

Package Outline



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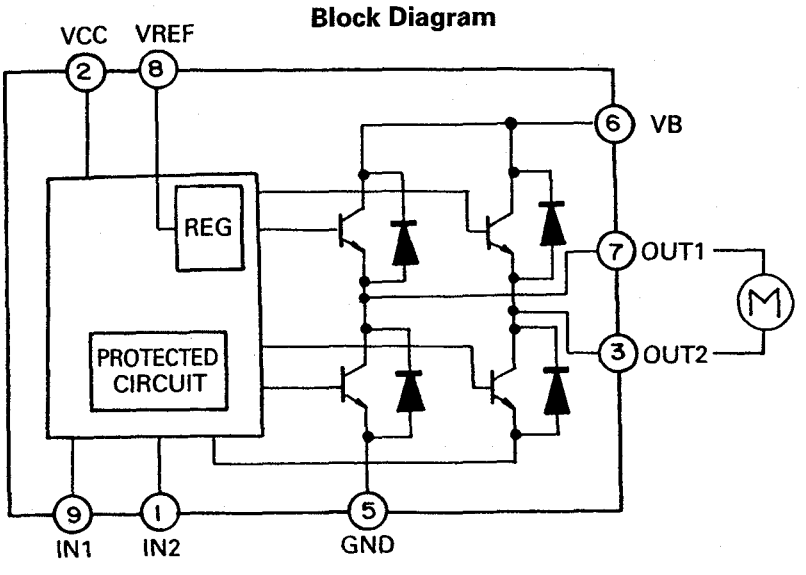

NJM2177A : IC301

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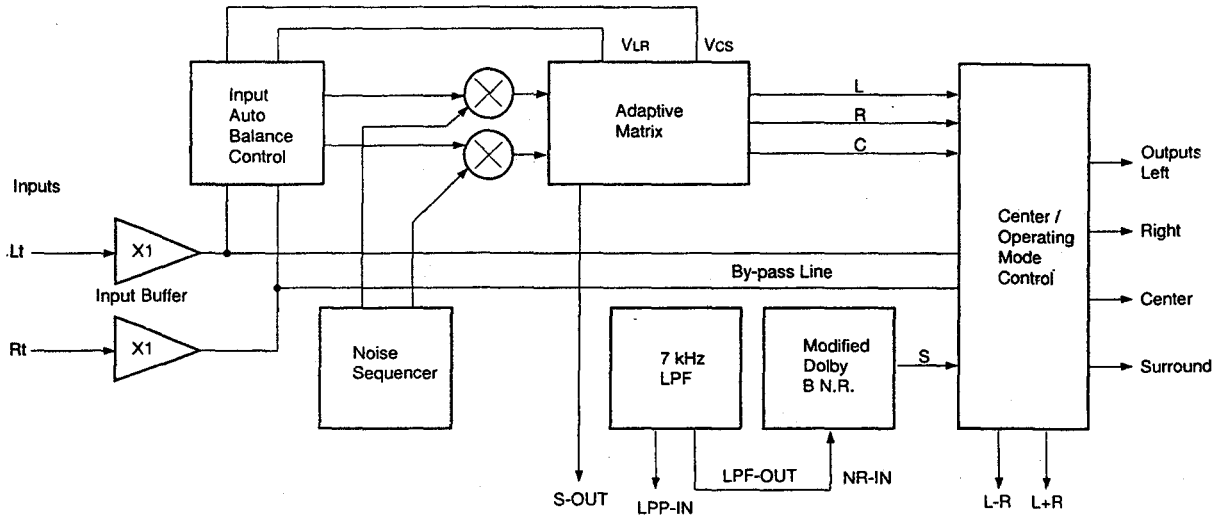

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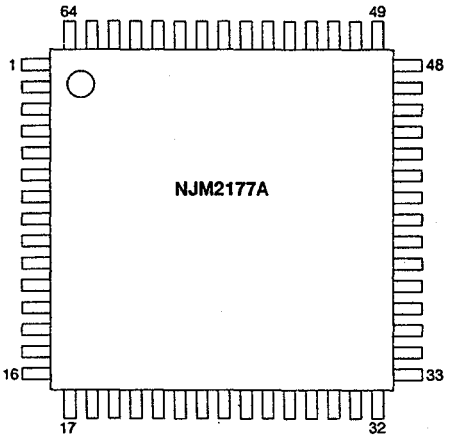
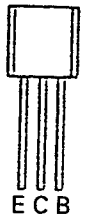
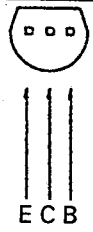
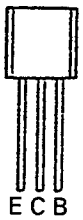
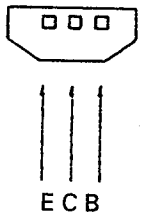
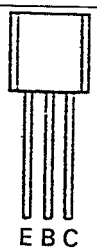
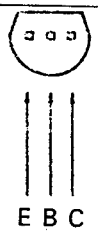
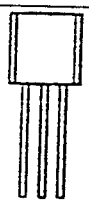
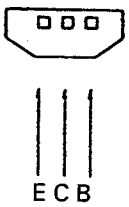
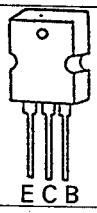
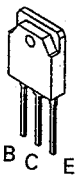
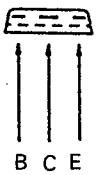


Pin Description

PIN No.	Pin Name	PIN No.	Pin Name	PIN No.	Pin Name
1	NC	23	NOISE-HPF	45	LPF-INV-IN
2	L-RECT-TC	24	NOISE-LPF	46	LPF-NINV-IN
3	R-BPF-OUT	25	S-OUT	47	NR-TC
4	R-BPF-IN	26	CENTER-CNT	48	NC
5	R-RECT-TC	27	MODE-CNT	49	NC
6	GND	28	L-OUT	50	VLR-TC3
7	AB-GATE	29	R-OUT	51	VCS-TC3
8	AB-HOLD-TC	30	L+R-OUT	52	VCS-TC2
9	L-AB-IN	31	L-R-OUT	53	VCS-TC1
10	L-AB-OUT	32	NC	54	VCS-T1
11	L-IN	33	NC	55	VLR-TC2
12	L-INBUF-OUT	34	CENTER-MODE	56	S-RECT-OUT
13	R-INBUF-OUT	35	Vcc	57	C-RECT-OUT
14	R-IN	36	C-OUT	58	R-RECT-OUT
15	R-AB-OUT	37	S'-OUT	59	L-RECT-OUT
16	NC	38	IREF	60	S-RECT-TC
17	NC	39	NR-VCF	61	C-RECT-TC
18	R-AB-IN	40	NR-IN	62	L-BPF-OUT
19	NOISE-CNT-E	41	VREF	63	L-BPF-IN
20	NOISE-CNT-A	42	VREF	64	NC
21	NOISE-CNT-B	43	NR-WT		
22	NOISE-REF	44	LPF-OUT		

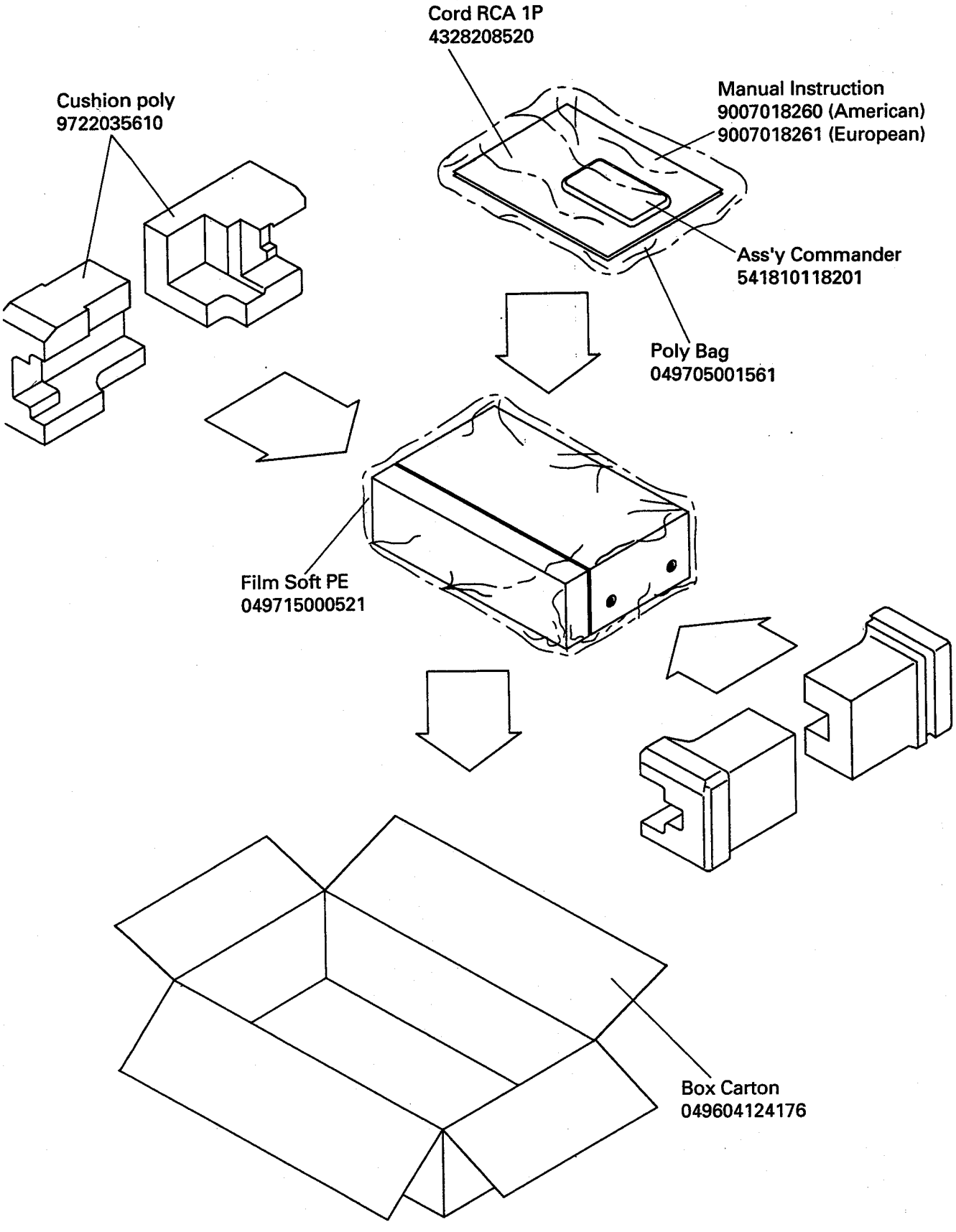
TRANSISTORS LEAD IDENTIFICATION

TRANSISTOR	FRONT VIEW	BOTTOM VIEW
TDA 1302 KTC3200/KTC2240 KTC3198/KTC1815 KTC1923/KTC3194 KTA2400 KTA1268/KTA970 KTA1266/KTA1015		
DTC114YS DTA114YS		
MPSA06 MPSA56		
KTA1024 KTC3206		
2SC4137 KSC4883 KSA1859		
2SA 1265N-O 2SC3182N-O		

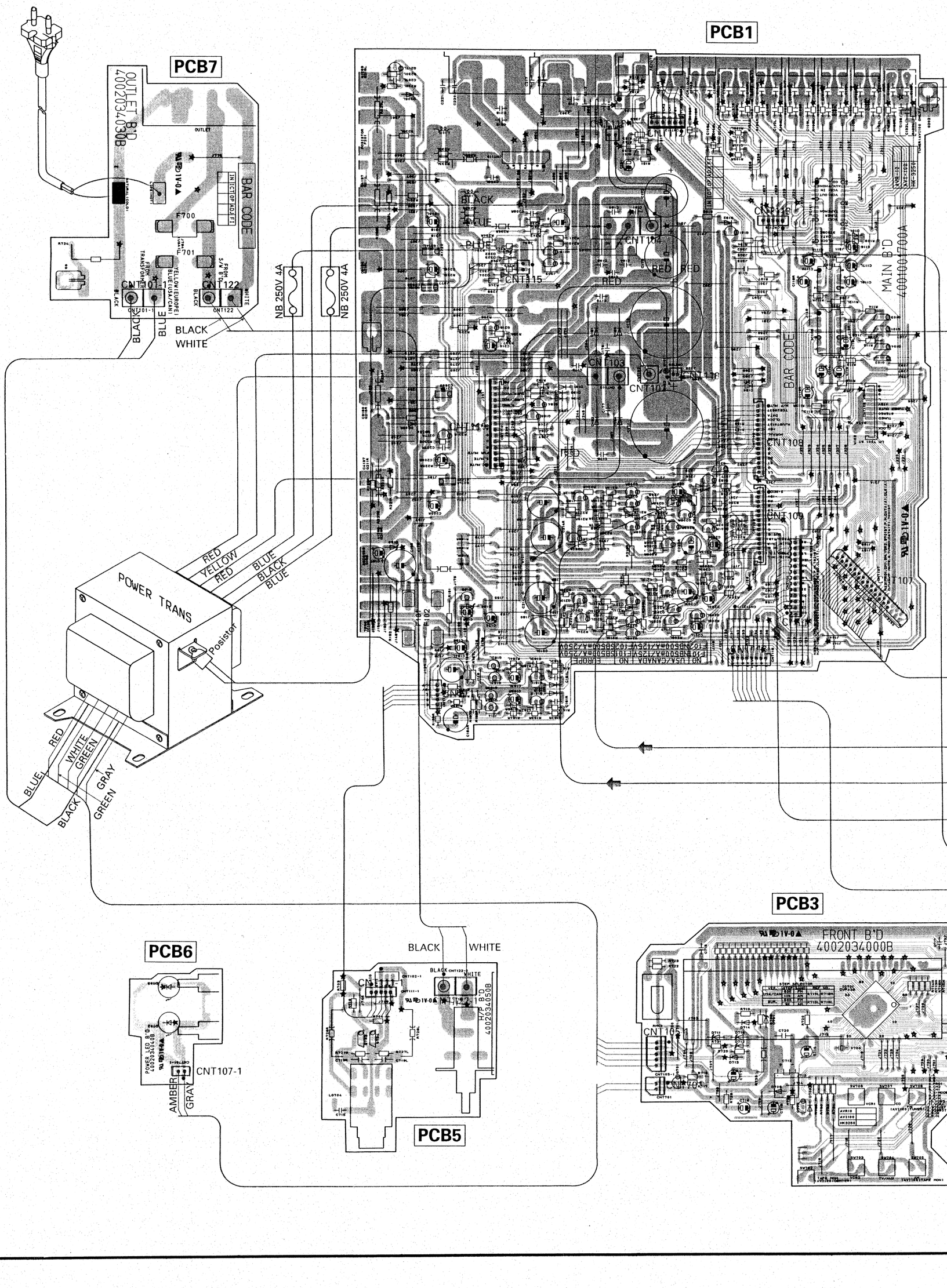
TERMINAL NAME

B→BASE
C→COLLECTOR
E→EMITTER

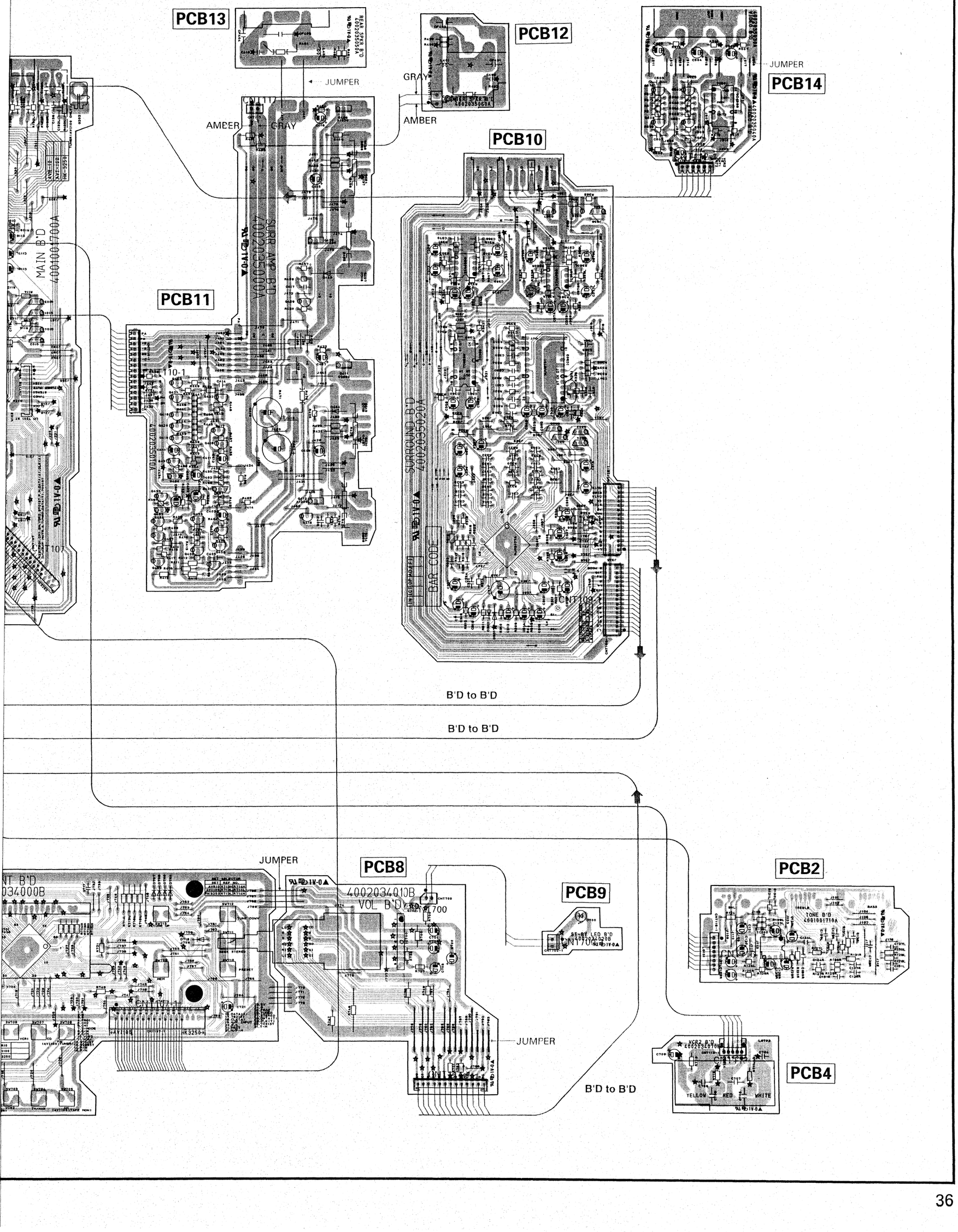
PACKAGE


Cord RCA 1P
4328208520
Manual Instruction
9007018260 (American)
9007018261 (European)
Cushion poly
9722035610
Ass'y Commander
541810118201
Poly Bag
049705001561
Film Soft PE
049715000521
Box Carton
049604124176

WIRING DIAGRAM



G H I J K L M


PCB13
REAR SPKR B'D
400203595 0A
JUMPER
PCB12
GRAY
AMBER
AMBER
GRAY
PCB14
JUMPER
PCB10
SURR AMP B'D
400203500 0A
PCB11
SURROUND B'D
400203502 0A
BAR CODE
CNT109
B'D to B'D
B'D to B'D
JUMPER
PCB8
400203401 0B
VOL B'D
CNT700
PCB9
ST-BY LED B'D
400203402 0B
CN1700
PCB2
TONE B'D
400180171 0A
JUMPER
PCB4
YELLOW
RED
WHITE
B'D to B'D

SCHEMATIC DIAGRAM I

A B C D E F G

1 2 3 4 5 6 7 8 9

CD SIGNAL
TAPE MON. IN SIGNAL
CNT114 TO VOLUME Page(38) SCHEMATIC DIAGRAM(II) B 7 K
CNT113 TO VCR2 Page(38) SCHEMATIC DIAGRAM(II) D 7 J
CNT114
CNT113
CENTER SIGNAL
REAR SIGNAL
FRONT Lch. SIGNAL
TAPE MON. OUT SIGNAL
VCR1 IN SIGNAL
VCR1 OUT SIGNAL
TUNER SIGNAL
PCB2 TONE
FRONT Lch. SIGNAL
CNT116-1
CNT116
FRONT MUTE
H/P-MUTE
SURR. MUTE
CD
AUX
TAPE MONITOR
VCR1
TUNER
REMOTE
IN
OUT
LC7821
IC101
IC102 KIA4559P
IC103 LC4966
IC104 LTV-817
IC105 KIA4559P
IC106 7806
Q101 A114Y
Q102 C114Y
Q103 A114Y
Q104 A114V
Q151 A114Y
Q161L KTC3200BL
Q161R KTC3200BL
Q162L MPSA06Y
Q162R MPSA06Y
Q163L MPSA56Y
Q163R MPSA56Y
Q200 DTC114YS
Q201L 2SD1302
Q201R 2SD1302
Q202 DTA114YS
Q203L KTA970BL
Q203R KTA970BL
Q204L KTA970BL
Q204R KTA970BL
Q205L KTA970BL
Q205R KTA970BL
Q206L KTA1266Y
Q206R KTA1015Y
Q181 BKTC3198Y
Q185 BKTC3198Y
D101 1N4148
D193 1N4148
CNT112 V2 G G 5V V1 V2
CNT111 L G R 5V H/P
CNT110 CM SM PM G C G S CG C-Vcc C+Vcc SG S-Vcc S+Vcc PA PB
CNT109 MAIN-IN(L) PRE-OUT(L) G-IN MAIN-IN(R) PRE-OUT(R) G-OUT COUT G SOUT 15V LSOUT G RSOUT -15V S-MOD
CNT108 LT G RT G E B A WIDE NORMAL 5V 9701ST CLK DATA 9299ST H/P-MUTE

G H I J K L M

PCB1 MAIN

PROTECTION A

PROTECTION B

FRONT Lch SIGNAL

EUROPE

SPKR

+4.8V

CNT118-1

CNT118-1
Page(37)
SCHEMATIC
DIAGRAM(I)
7 I

CNT115

TRANS

P201 POSISTOR

IDLING CURRENT ADJ.

CNT118
TO MAIN
Page(37)
SCHEMATIC
DIAGRAM(I)
M 2 I

CNT105
TO FRONT
Page(38)
SCHEMATIC
DIAGRAM(II)
H 9 H

THER. FUSE (169° C)

TRANSFORMER

CNT101
TO OUTLET
Page(38)
SCHEMATIC
DIAGRAM(II)
C 9 L

CNT112
TO VIDEO
Page(39)
SCHEMATIC
DIAGRAM(III)
M 7 A

CNT111
TO HEADPHONE
Page(38)
SCHEMATIC
DIAGRAM(II)
K 8 B

CNT110
TO SURROUND AMP
Page(39)
SCHEMATIC
DIAGRAM(III)
H 9 C

CNT109
TO SURROUND
Page(39)
SCHEMATIC
DIAGRAM(III)
E 9 D

CNT108
TO SORROUND
Page(39)
SCHEMATIC
DIAGRAM(III)
F 9 E

CNT107
TO FROND
Page(38)
SCHEMATIC
DIAGRAM(II)
F 9 F

CH. GND

CENTER MUTE

SCHEMATIC DIAGRAM II

A | B | C | D | E | F | G

1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9

PCB9 VOLUME LED

PCB8 VOLUME

PCB3 FRONT

CNT700-1

D700

CNT700

R700 680

R705 4.7

R706 10K

C700 10/50

C702 100/16

R707 3K

Q700 DTC114TS

C701 100/10

C703 100/10

TA7291S IC700

IN2 VCC OUT2 NC GND VS OUT1 VREF IN1

50K(B) FRONT Lch. VOLUME

50K(B) 1K R702 47K R701

50K(B) REAR VOLUME

50K(B) CENTER VOLUME

RT G LT +15V RO G LO G SI SO G CI CO

CNT114-1

CNT114-1 FROM MAIN Page(37) SCHEMATIC DIAGRAM(I) C 1 K

FL700

TIMER 12 STEREO TUNED AUTO VCR 12 VCD TAPE 2M PRESET

dB KHz MHz MEM

RDS TA NEWS INFO Pro Logic 3 Stereo HALL SLEEP

C710 473-M C711 473-M

PIN / VERSION	65	66
USA/CAN	H	H
EUROPE	L	L

51-54

CXP8231

IC701

1. PROTECTION
2. AMC
3. H/P INPUT
4. TUNER MUTE
5. LM7001
6. FM STEP
7. AM STEP
8. CLK(T)
10. DATA(T)
11. CLK(A)
12. LC7821
13. DATA(A)
14. TC9299
15. NJU9701
16. VCR1
17. VCR2
18-21. KEY INPUT1-4
22. STEREO
23. TUNED
24. H/P MUTE
25. CENTER MUTE
26. SUBR MUTE
27. POWER MUTE
28. FRONT MUTE
29. S-MODE
30. RESET
31-32. X-TAL
33. GND
34-36. NS1-NS3
37-38. CENTER MODE
39. PRO1
40. PRO2
42-57. SEG.
59-70. GRID
71. Vref
72-73. Vdd
74-75. VOL. DOWM/UP
76. ST-BY LED
77. VOL. IN01
78. POWER DOWN
79-80. SET SELETOR

R713H/L 47K R714L/H 47K 1N4148 R715H 47K R715L 47K R716L/L 47K

SET SELECTOR

SET	REF. NO.	
AVR10	R713H	R714H
AV110C	R713L	R714L
HK3250	R713L	R714H

STEP SELECTOR

BAND	STEP	REF. NO.	
FM	50K	R715L	R716H
AM	10K		
FM	50K	R715L	R716L
AM	9K		

R708 4.7K D701 4.3V-B R710 4.7K 1N4148 D714

C721 0.47/50

POWER DOWN

CNT113-1 FROM MAIN Page(45) SCHEMATIC DIAGRAM(I) D 9 J

DIGI LINK

6V

PCB6 POWER

CNT701

R755 1k Q701 KTC3198 R756 120 R758 1k Q705 KTC3198 R757 120

D702

B1-co (Ambe

PCB4 VCR2

CNT113-1 L B G G

VIDEO

R711 1K C707 100P

R712 1K C708 100P

CNT101-1 L R VIDEO

C704 473-C R709 75 C709 33/16

CH. GND

CNT101-1

PCB7 OUTLET

CNT122

AC120V/60HZ HOT USA/Canada Version F701 NB4A/125V OUTLET R724 COLD 3.3M(1/2W)

CNT122

AC230V/50HZ HOT Europe Version F700 T2.5A/250V F701 T1A/250V OUTLET COLD

A B E PRO1 CM2 CM1 S-MODE SUBR. MUTE CENTER MUTE VCR2 VCR1 9701ST 9299ST POWER MUTE FRONT MUTE DATA(A) 7821ST CLK(A) H/P INPUT D/L PROTECT H/P-MUTE 5V G PRO2

CNT107-1

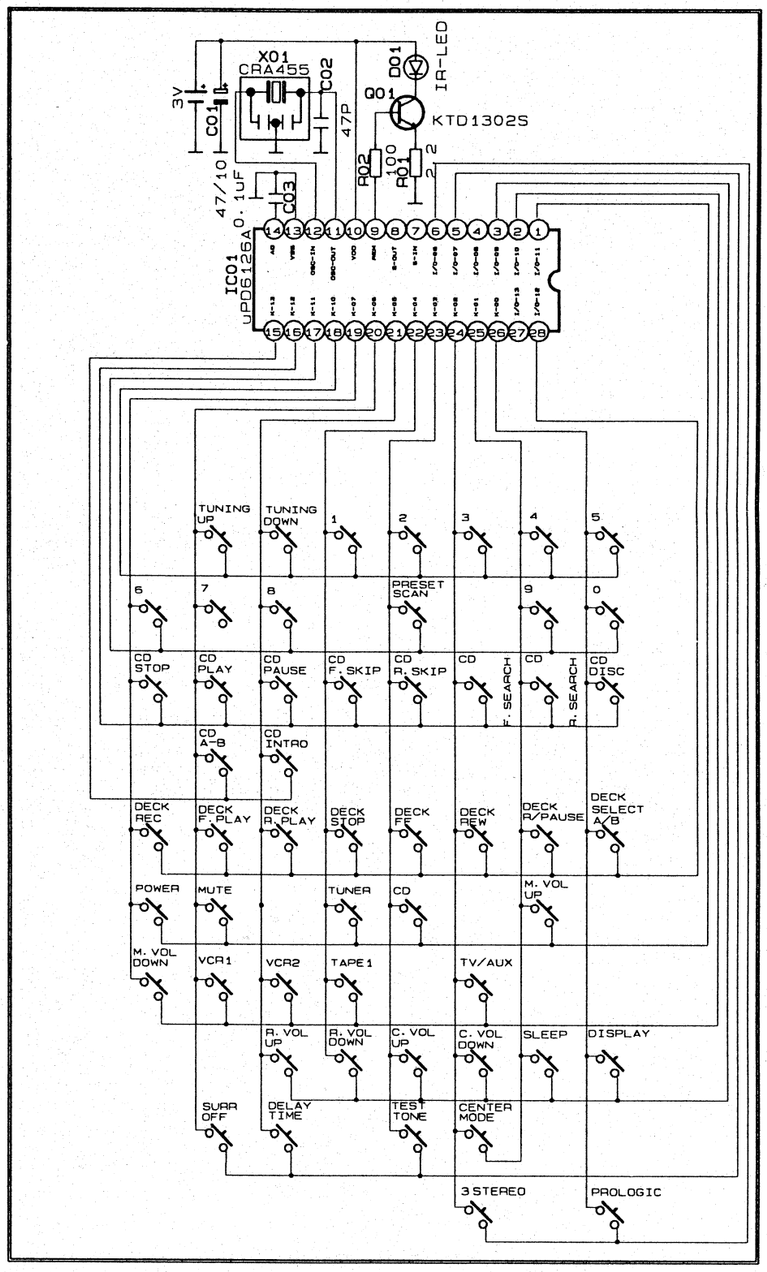
CNT122 TO HEADPHOND Page(38) SCHEMATIC DIAGRAM(II) K 8 M

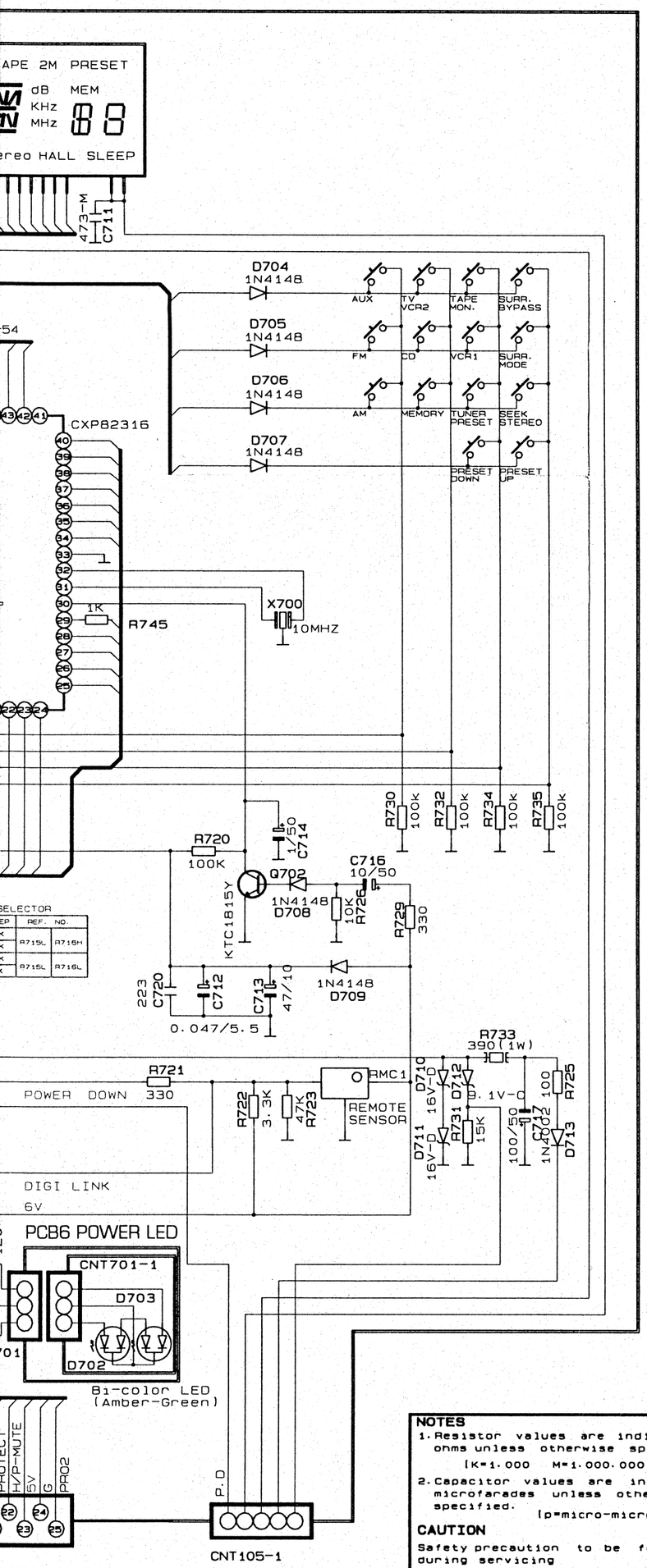
CNT101-1 FROM TRANS Page(37) SCHEMATIC DIAGRAM(I) L 7 L

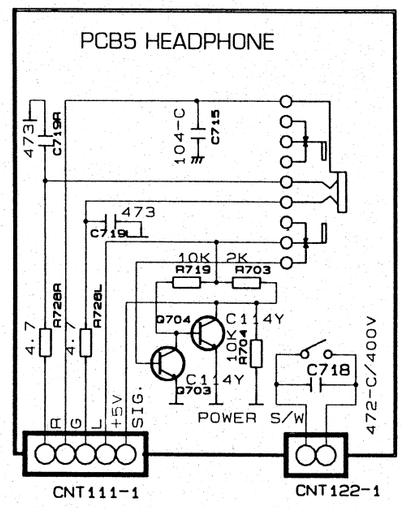
CNT107-1 FROM MAIN Page(37) SCHEMATIC DIAGRAM(I) H 9 F

G H I J K L M

COMMANDER







CNT111-1
FROM MAIN
Page(37)
SCHEMATIC
DIAGRAM(I)
C
9
B

CNT122-1
FROM OUTLET
Page(38)
SCHEMATIC
DIAGRAM(I)
B
8
M

NOTES

1. Resistor values are indicated in ohms unless otherwise specified
   [K=1.000 M=1.000.000]
2. Capacitor values are indicated in microfarades unless otherwise specified.
   [p=micro-microfarades]

CAUTION

Safety precaution to be followed during servicing

1] Since those parts marked with ⚠1 are critical parts for safety. use only the one described in the parts list

2] Before returning the set to the customer make appropriate leakage current or resistance measurements to determine the exposed parts are properly insulated from the supply circuit.

SCHEMATIC DIAGRAM III

A B C D E F G

1 2 3 4 5 6 7 8 9

PCB10 SURROUND

DELAY IN

DELAY OUT

REAR SIGNAL

CENTER SIGNAL

FRONT Lch. SIGNAL

IC301 Pin27

S-MODE	VOLTAGE
PROLOGIC	5V
3-STEREO	2.5V
BYPASS	0V

NJN9701 IC302

TC9299 IC303

KIA4559P IC304

NJM2177A

IC301

SUB WOOPER OUT

MAIN IN

PRE OUT

IC305 KIA4559P

Q306 2SD1302

Q307 2SD1302

Q304 KRA107M

Q303 KRA107M

Q302 DTC114Y

Q301 DTC114Y

Q305 DTA114YS

WIDE

NOMAL

S-MODE

S-OUT

FROM MAIN B'D CNT109-1

CNT108-1

G | H | I | J | K | L | M

PCB11 SURROUND AMP